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**BEFORE THE ARIZONA CORPORATION COMMISSION**

IN THE MATTER OF THE APPLICATION  
OF ARIZONA WATER COMPANY, AN  
ARIZONA CORPORATION, FOR A  
DETERMINATION OF THE FAIR VALUE  
OF ITS UTILITY PLANT AND PROPERTY,  
AND FOR ADJUSTMENTS TO ITS RATES  
AND CHARGES FOR UTILITY SERVICE  
FURNISHED BY ITS EASTERN GROUP  
AND FOR CERTAIN RELATED  
APPROVALS.

DOCKET NO. W-01445A-11-0310

**NOTICE OF FILING  
REBUTTAL TESTIMONY**

Applicant, Arizona Water Company, hereby files the Rebuttal Testimony of Fredrick K. Schneider, Joseph D. Harris, Joel M. Reiker, Thomas M. Zepp and Pauline M. Ahern in the above-captioned docket.

DATED this 10th day of April, 2012.

ARIZONA WATER COMPANY

By: *Robert W. Geake*

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An original and fifteen (15) copies of the foregoing were delivered this 10th day of April, 2012 to:

Docketing Supervisor  
Docket Control Division  
Arizona Corporation Commission  
1200 West Washington Street  
Phoenix, Arizona 85007

A copy of the foregoing was mailed this 10th day of April, 2012 to:

Ms. Sarah Harpring  
Chief Administrative Law Judge  
Hearing Division  
Arizona Corporation Commission  
1200 West Washington Street  
Phoenix, Arizona 85007

Mr. Steven M. Olea, Director  
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By: R. W. Seake



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**DOCKET  
W-01445A-11-0310**

**ARIZONA WATER COMPANY**  
**2011 EASTERN GROUP RATE CASE**  
**Test Year Ended December 31, 2010**  
*(Searchable PDF)*



**Arizona Water Company's**  
**Rebuttal Testimonies and Exhibits**  
**Docket No. W-01445A-11-0310**  
*April 10, 2012*

**ARIZONA WATER COMPANY**



**Docket No. W-01445A-11-0310**

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**2011 RATE HEARING**

**For Test Year Ending 12/31/10**

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**PREPARED  
REBUTTAL TESTIMONY & EXHIBITS  
OF  
PAULINE M. AHERN**

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# TABLE OF CONTENTS

I.	Introduction .....	3
II.	Summary .....	5
III.	ACC Staff Witness Michlik's Comments on DSIC .....	6
IV.	RUCO Witness Rigsby's Comments on DSIC .....	20
V.	The Need for a Sufficient Authorized Rate of Return on Common Equity .....	29
Appendix A – Professional Qualifications of Pauline M. Ahern		

## EXHIBITS

2009 Report Card for America's Infrastructure.....	PMA-1
Graphs .....	PMA-2
Resolution Supporting Consideration of Regulatory Policies Deemed as "Best Practices" .....	PMA-3
NAWC Article (Distribution System Investment Charge (DSIC) for Water and Wastewater Systems).....	PMA-4
Global Regulated Water Utilities Article (Moody's Global Infrastructure Finance, December 2009) ...	PMA-5
U.S. Investor-Owned Water Utilities Successfully Navigate Turbulent Financial Markets (Standard & Poor's, July 10, 2009).....	PMA-6
A Stable Industry Outlook Supports Solid Ratings for U.S. Regulated Gas and Water Utilities (Standard & Poor's, April 19, 2011) .....	PMA-7
Middlesex Water Co. (Standard & Poor's, October 26, 2011) .....	PMA-8
Prepared Testimony of Robert F. Powelson, Chairman, Pennsylvania Public Utility Commission, April 28, 2011 .....	PMA-9
New Approach to Estimating the Cost of Common Equity Capital for Public Utilities (August 26, 2011) .....	PMA-10
Calculation of the Predictive Rick Premium Model (PRPM™) .....	PMA-11

# ARIZONA WATER COMPANY

## Rebuttal Testimony of Pauline M. Ahern

### I. Introduction

#### Q. PLEASE STATE YOUR NAME, EMPLOYER AND OCCUPATION.

A. My name is Pauline M. Ahern. I am a Principal of AUS Consultants. My business address is 155 Gaither Drive, Suite A, Mt. Laurel, New Jersey 08054.

#### Q. PLEASE SUMMARIZE YOUR PROFESSIONAL EXPERIENCE AND EDUCATIONAL BACKGROUND.

A. I have offered expert testimony on behalf of investor-owned utilities before twenty-six state regulatory commissions and state tax commissions on rate of return issues, including but not limited to common equity cost rate, fair rate of return, capital structure issues, credit quality issues and the like. I am a graduate of Clark University, Worcester, MA, where I received a Bachelor of Arts degree with honors in Economics in 1973. In 1991, I received a Master of Business Administration with high honors and a concentration in finance from Rutgers University. The details of these appearances and my educational background, presentations I have given as well as articles I have co-authored are shown in Appendix A supplementing this testimony.

On a monthly basis, I also calculate and maintain the American Gas Association ("A.G.A.") Gas Index under contract with the A.G.A., which serves as the benchmark against which the performance of the American Gas Index Fund ("AGIF") is measured. The A.G.A. Gas Index and AGIF are a market capitalization weighted index and fund, respectively, comprised of the common stocks of the publicly traded corporate members of the A.G.A.

1 I am also the Publisher of AUS Utility Reports, responsible for supervising  
2 the production, publication, distribution and marketing of its various reports.

3 I am a member of the Society of Utility and Regulatory Financial Analysts  
4 ("SURFA") where I serve on its Board of Directors, having served two terms as  
5 President, from 2006 – 2008 and 2008 – 2010. Previously, I held the position of  
6 Secretary/Treasurer from 2004 – 2006. In 1992, I was awarded the professional  
7 designation "Certified Rate of Return Analyst" ("CRR") by SURFA, which is  
8 based upon education, experience and the successful completion of a  
9 comprehensive written examination.

10 I am also an associate member of the National Association of Water  
11 Companies, serving on its Finance/Accounting/Taxation Committee; a member of  
12 the Energy Association of Pennsylvania, formerly the Pennsylvania Gas  
13 Association; and a member of the American Finance and Financial Management  
14 Associations.

15 **Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY IN THIS PROCEEDING?**

16 A. The purpose is to provide testimony on behalf of Arizona Water Company  
17 ("AWC" or the "Company") in response to Arizona Corporation Commission  
18 ("ACC" or the "Commission") Utilities Division ("Staff") witness Jeffrey M. Michlik  
19 and Residential Utility Consumer Office ("RUCO") witness William A. Rigsby  
20 relative to their positions on the Company's proposed Distribution System  
21 Improvement Charge ("DSIC"). In addition, I will comment upon the adequacy of  
22 Staff witness John A. Cassidy's recommended common equity cost rate of 9.1%  
23 and RUCO witness Rigsby's recommended common equity cost rate of 9.3%.

24 **Q. HAVE YOU PREPARED EXHIBITS TO SUPPORT YOUR REBUTTAL**  
25 **TESTIMONY?**

26 A. Yes. They have been marked as Exhibit PMA-1 through Exhibit PMA-11.  
27  
28

1 **II. Summary**

2 **Q. PLEASE SUMMARIZE YOUR REBUTTAL TESTIMONY.**

3 A. My rebuttal testimony demonstrates that Mr. Michlik's opinion of regulatory lag  
4 and his recommended rejection of the Company's proposed DSIC mechanism  
5 will perpetuate the Company's current distressed financial condition and impinge  
6 upon its ability to finance and construct infrastructure needed to provide safe and  
7 reliable service to the public.

8 My rebuttal testimony also demonstrates the fallacy of Mr. Rigsby's reasons  
9 for recommending rejection of the Company's proposed DSIC. The magnitude of  
10 the Company's need to replace and repair infrastructure is anything but ordinary  
11 and is very similar to the Company's Arsenic Cost Recovery Mechanism  
12 ("ACRM"), especially given the fact that AWC has been directed by the ACC to  
13 reduce water losses below 10%. My rebuttal testimony also demonstrates that  
14 the DSIC, and DSIC-like mechanisms, are widely accepted and adopted  
15 throughout the U.S. and are considered credit supportive by two of the major  
16 bond/credit rating agencies, Standard & Poor's ("S&P") and Moody's. Such  
17 mechanisms, being credit supportive, are conducive to the maintenance of the  
18 integrity of invested capital and enable utilities to attract needed new capital on  
19 reasonable terms consistent with the judicial standards for a fair rate of return  
20 established in the Hope<sup>1</sup> and Bluefield<sup>2</sup> decisions. My rebuttal testimony also  
21 responds to Mr. Rigsby's assertion that AWC has not "proven that it would not be  
22 able to ensure safe and reliable water service or achieve cost recovery absent  
23 the DSIC" by my citing to Chairman Robert Powelson of the Pennsylvania Public  
24 Utility Commission ("PPUC"), who testified before the Pennsylvania House of  
25 Representatives that such cost-recovery mechanisms are necessary to "ensure  
26

27 <sup>1</sup> Federal Power Commission v. Hope Natural Gas Co., 320 U.S. 591 (1944).

28 <sup>2</sup> Bluefield Water Works Improvement Co. v. Public Serv. Comm'n, 262 U.S. 679 (1922).

1 sustainable practices in promoting needed capital investment and cost-effective  
2 rates."

3 Finally, my rebuttal testimony demonstrates that neither Staff witness John  
4 A. Cassidy's recommended 9.1% common equity cost rate, nor Mr. Rigsby's  
5 recommended 9.3% common equity cost rate adequately reflect the cost of  
6 common equity for either the water utility industry in general, or AWC specifically.  
7 The issue of sufficient common equity returns is especially critical in light of the  
8 Company's anticipated near-term capital expenditure needs.

9 **III. ACC Staff Witness Michlik's Comments on DSIC**

10 **Q. MR. MICHLIK STATES ON PAGE 33 OF HIS DIRECT TESTIMONY AT LINE**  
11 **21, THAT "A PRIMARY CONCERN IS THAT A DSIC ALTERS THE BALANCE**  
12 **OF RATEMAKING LAGS." DO YOU AGREE?**

13 **A.** No. Regulatory lag occurs during the time between the incurrence of a utility  
14 capital expenditure or expense and the time when the utility can begin to earn a  
15 return on and of the capital investment or recovery of the expense incurred.  
16 Such a lag can result in the permanent impairment of the utility's ability to earn its  
17 authorized return on its invested capital. Partial mitigation of such regulatory lag,  
18 through the adoption of a DSIC mechanism, will improve the capital  
19 attractiveness of AWC, improve its service quality and reliability, and provide for  
20 more moderate, gradual rate increases, as the Company will be able to limit rate  
21 increases to its customers to smaller, more regularly timed increases as opposed  
22 to larger ones spread out over longer periods of time, as noted by AWC witness  
23 Joseph D. Harris in his direct testimony at page 20, lines 21 – 24.

24 Improved service quality and reliability is critical to the water utility industry  
25 in general, and to AWC specifically. Although the American Society of Civil  
26 Engineers' ("ASCE") concern is primarily focused on municipal infrastructure, its  
27 comments relative to water utility infrastructure apply equally to investor-owned  
28



1 water infrastructure. The ASCE has given a grade of D- to the U.S. water  
2 infrastructure systems. It is widely recognized that such infrastructure is in dire  
3 need of repair and replacement. In its 2009 Report Card for America's  
4 Infrastructure, excerpted in Exhibit PMA-1, the ASCE states the following (See  
5 Exhibit PMA-1, Pg. 12):

6  
7 Drinking water systems provide a critical public health function and  
8 are essential to life, economic development, and growth.  
9 Disruptions in service can hinder disaster response and recovery  
10 efforts, expose the public to water-borne contaminants, and cause  
11 damage to roadways, structures, and other infrastructure,  
12 endangering lives and resulting in billions of dollars in losses.

13 In addition, in its press release announcing the proposal to draft rules for  
14 public comment on the implementation of a DSIC, the New Jersey Board of  
15 Public Utilities ("BPU") stated:

16 Critical water distribution components form the basis of a functional  
17 and modern water infrastructure system, and **enhance the safety,**  
18 **reliability, system flows, and quality of water while also**  
19 **improving its pressure and conservation.**

20 To reject the adoption of the Company's proposed DSIC mechanism will  
21 continue to perpetuate the negative impact of regulatory lag upon the Company's  
22 already compromised financials, as described in Mr. Harris' direct testimony at  
23 page 15, line 13 through page 16, line 2, impinging upon its ability to meet its  
24 obligation of providing safe and reliable water service to its customers, as also  
25 discussed by Mr. Harris on page 20, line 19 through page 21, line 9 of his direct  
26 testimony. The presence of regulatory lag is particularly crucial for water utilities,  
27 including AWC, as water utilities are the most capital intensive utility industry  
28 relative to the electric, combination electric and gas and the natural gas utility  
industries. Moreover, the capital intensity of the water utility industry is

exacerbated by the magnitude of the capital expenditure needs anticipated over the next 20 years.

**Q. PLEASE DISCUSS THE ANTICIPATED CAPITAL EXPENDITURE NEEDS OF THE WATER UTILITY INDUSTRY.**

A. Not only is the water utility industry historically capital intensive, it is expected to incur significant capital expenditure needs over the next 20 years. Prior to the recent economic and capital market turmoil, S&P noted:<sup>3</sup>

Standard & Poor's expects the already capital-intensive water utility industry to become even more so over the next several years. Due to the aging pipeline infrastructure and more stringent quality standards, the U.S. Environmental Protection Agency's [sic] (EPA) foresees a need for \$277 billion to upgrade and maintain U.S. water utilities through 2022, with about \$185 billion going toward infrastructure improvements. In addition, about \$200 billion will be needed for wastewater applications, which suggests increased capital spending to be a long-term trend in this industry.

In line with these trends, many companies have announced aggressive capital spending programs. Forecast capital spending primarily focuses on infrastructure replacements and growth initiatives. Over the past five years, capital spending has been equivalent to about three times its depreciation expense. However, companies are now forecasting spending to be at or above four times depreciation expense over the intermediate term. For companies in regulatory jurisdictions that provide timely cost recovery for capital expenditures, the increased spending is likely to have a minimal effect on financial metrics and ratings. However, companies in areas without these mechanisms, earnings, and cash flow could be negatively affected by the increased spending levels, which over the longer term could harm a company's overall credit profile.

Due to the high level of capital spending, U.S. investor-owned water utilities do not generate positive free cash flow. This, coupled

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<sup>3</sup> Standard & Poor's, Credit Outlook For U.S. Investor-Owned Water Utilities Should Remain Stable in 2008 (January 31, 2008) 2, 4.

1 with the forecast increase in capital spending over the intermediate  
2 term, will require additional access to capital markets. We expect  
3 rated water companies to have enough financial flexibility to gain  
4 that access. Ratings actions shouldn't result from this increased  
5 market activity because we expect companies to use a balanced  
6 financing approach, which should maintain debt near existing  
7 levels.

8 The EPA states the following:<sup>4</sup>

9 The survey found that the total nationwide infrastructure need is  
10 \$334.8 billion for the 20-year period from January 2007 through  
11 December 2026. With \$200.8 billion in needs over the next 20  
12 years, transmission and distribution projects represent the largest  
13 category of need. This result is consistent with the fact that  
14 transmission and distribution mains account for most of the nation's  
15 water infrastructure. The other categories, in descending order of  
16 need are: treatment, storage, source and a miscellaneous category  
17 of needs called "other". The large magnitude of the national need  
18 reflects the challenges confronting water systems as they deal with  
19 an infrastructure network that has aged considerably since these  
20 systems were constructed, in many cases, 50 to 100 years ago.

21 The 2009 Report Card for America's Infrastructure<sup>5</sup>, published by the  
22 ASCE, states the following (page 9 of Exhibit PMA-1):

23 The nation's drinking-water systems face staggering public  
24 investment needs over the next 20 years. Although America  
25 spends billions on infrastructure each year, drinking water systems  
26 face an annual shortfall of at least \$11 billion in funding needed to  
27 replace aging facilities that are near the end of their useful life and  
28 to comply with existing and future federal water regulations. The  
shortfall does not account for any growth in the demand for drinking  
water over the next 20 years.<sup>2</sup>

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<sup>4</sup> "Fact Sheet: "EPA's 2007 Drinking Water Infrastructure Needs Survey and Assessment", United States Environmental Protection Agency, Office of Water, February 2009, 1.

<sup>5</sup> 2009 American Society of Civil Engineers, Report Card for America's Infrastructure 2009.

1           The Company is estimating a cost of approximately \$108 million for  
2 infrastructure replacements in its Eastern and Western Groups for the purpose of  
3 reducing water loss, which represents an increase of more than 36% over 2010  
4 net plant on a Company wide basis and more than 66% of the Company's total  
5 capitalization, as discussed on page 16, line 27 through page 17, line 1 of Mr.  
6 Harris' direct testimony.

7 **Q. PLEASE DISCUSS THE BUSINESS RISKS FACING THE WATER UTILITY**  
8 **INDUSTRY IN GENERAL.**

9 A. Water is essential to life, and unlike electricity or natural gas, water is the only  
10 utility product that is ingested. Consequently, water quality and reliability is of  
11 paramount importance to the health and well-being of customers and is,  
12 therefore, subject to additional health and safety regulations. Also, unlike many  
13 electric and natural gas utilities, water companies serve a production function in  
14 addition to the delivery functions served by electric and gas utilities.

15           Water utilities obtain supply from wells, aquifers, surface water reservoirs,  
16 streams and rivers, or through water rights. Throughout the years, well supplies  
17 and aquifers have been environmentally threatened, with historically minor  
18 purification treatment giving way to major well rehabilitation, treatment or  
19 replacement. Simultaneously, environmental water quality standards have  
20 tightened considerably, requiring multiple treatments. In addition, drought, water  
21 source overuse, runoff, regulatory response to threatened species/habitat  
22 protection and other factors are limiting supply availability. As for water rights,  
23 their lives are typically finite with renewability uncertain. In the course of  
24 procuring water supplies and treating water so that it complies with Safe Drinking  
25 Water Act standards, water utilities have an ever-increasing responsibility to be  
26 stewards of the environment from which supplies are drawn, in order to preserve  
27 and protect those essential natural resources.

1 Electric and natural gas companies, where transmission and distribution is  
2 separate from generation, generally do not produce the electricity or natural gas  
3 which they transmit and distribute. In contrast, water utilities are typically  
4 vertically engaged in the entire process of acquiring supply, production, treatment  
5 and distribution of water. Hence, water utilities require significant capital  
6 investment in not only the sources of supply and production (wells and treatment  
7 facilities), but also in transmission and distribution systems, both to serve  
8 additional customers and to replace aging systems, creating a major risk facing  
9 the water and wastewater utility industry.

10 Value Line Investment Survey<sup>6</sup> ("Value Line") observes the following about  
11 the water utility industry:

12 As time goes by many already aging water infrastructures grow  
13 older and need repair, or perhaps complete overhauls. These  
14 costs have soared into the hundreds of millions of dollars and are  
15 not likely to subside anytime soon, without repercussions. A more  
16 business-friendly regulatory environment is offsetting some of the  
burden, but expenses related to doing business are eating away at  
profit margins.

17 Consequently, because the water and wastewater industry is much more  
18 capital-intensive than the electric, natural gas or telephone industries, the  
19 investment required to produce a dollar of revenue is greater. For example, as  
20 shown on page 1 of Exhibit PMA-2, it took \$3.83 of net utility plant on average to  
21 produce \$1.00 in operating revenues in 2010 for the water utility industry as a  
22 whole. As noted in Company witness William M. Garfield's Direct Testimony at  
23 page 10, lines 14 through 18, AWC is even more capital intensive than the  
24 average water utility, as it took \$7.60 of utility plant (\$5.68 relative to net utility  
25

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26 <sup>6</sup> Value Line Investment Survey, January 20, 2012.  
27  
28

1 plant) to produce \$1.00 in operating revenues in 2010. In contrast, for the  
2 electric, combination electric and gas and natural gas utility industries, on  
3 average it took only \$2.16, \$1.70 and \$1.27, respectively, to produce \$1.00 in  
4 operating revenues in 2010. The greater capital intensity of water utilities is not a  
5 new phenomenon either, as water utilities have exhibited a consistently and  
6 significantly greater capital intensity relative to electric, combination electric and  
7 gas and natural gas utilities during the ten years ended 2010, as also shown on  
8 page 1 of Exhibit PMA-2. As financing needs have increased over the last  
9 decade, the competition for capital from traditional sources has increased,  
10 making the need to maintain financial integrity and the ability to attract needed  
11 new capital increasingly important. Because investor-owned water and  
12 wastewater utilities typically do not receive federal funds for infrastructure  
13 replacement, the challenge to investor-owned water and wastewater utilities is  
14 exacerbated and their access to financing is restricted, thus increasing risk.

15 The National Association of Regulatory Commissioners ("NARUC") has  
16 also highlighted the challenges facing the water and wastewater industry  
17 stemming from its capital intensity. NARUC's Board of Directors adopted the  
18 following resolution (Exhibit PMA-3) in July 2005<sup>7</sup> specifically citing the DSIC as a  
19 best regulatory practice:

20  
21 WHEREAS, To meet the challenges of the water and  
22 wastewater industry which may face a combined capital investment  
23 requirement nearing one trillion dollars over a 20-year period, **the**  
24 **following policies and mechanisms were identified to help**  
25 **ensure sustainable practices in promoting needed capital**  
**investment and cost-effective rates:** a) the use of prospectively  
26 relevant test years; b) **the distribution system improvement**  
27 **charge;** c) construction work in progress; d) pass-through  
28

<sup>7</sup> "Resolution Supporting Consideration of Regulatory Policies Deemed as 'Best Practices'", Sponsored by the Committee on Water. Adopted by the NARUC Board of Directors, July 27, 2005.

1 adjustments; e) staff-assisted rate cases; f) consolidation to  
2 achieve economies of scale; g) acquisition adjustment policies to  
3 promote consolidation and elimination of non-viable systems; h) a  
4 streamlined rate case process; i) mediation and settlement  
5 procedures; j) defined timeframes for rate cases; k) integrated  
6 water resource management; l) a fair return on capital investment;  
7 *and* m) improved communications with ratepayers and  
8 stakeholders; *and*

9 WHEREAS, Due to the massive capital investment required  
10 to meet current and future water quality and infrastructure  
11 requirements, ***adequately adjusting allowed equity returns to***  
12 ***recognize industry risk in order to provide a fair return on***  
13 ***invested capital was recognized as crucial...***

14 RESOLVED, That the National Association of Regulatory  
15 Utility Commissions (NARUC), convened in its July 2006 Summer  
16 Meetings in Austin, Texas, conceptually supports review and  
17 consideration of the innovative regulatory policies and practices  
18 identified herein as "best practices," *and be it further*

19 RESOLVED, That NARUC recommends that economic  
20 regulators consider and adopt **as many as appropriate of the**  
21 **regulatory mechanisms identified herein as best practices...**

22 (emphasis added)

23 The water and wastewater utility industry also experiences lower relative  
24 depreciation rates. Lower depreciation rates, as one of the principal sources of  
25 internal cash flows for all utilities, mean that water and wastewater utility  
26 depreciation as a source of internally-generated cash is far less than for electric,  
27 natural gas or telephone utilities. Water and wastewater utilities' assets have  
28 longer lives and, hence, longer capital recovery periods. As such, water and  
wastewater utilities face greater risk due to inflation which results in a much  
higher replacement cost per dollar of net plant than for other types of utilities. As  
shown on page 2 of Exhibit PMA-2, water utilities experienced an average  
depreciation rate of 3.00% for 2010, with AWC experiencing a lower 2.2%

1 depreciation rate in 2010. In contrast, in 2010, the electric, combination electric  
2 and gas, natural gas or telephone industries, experienced average depreciation  
3 rates of 3.70%, 3.70% and 3.40%, respectively. As with capital intensity, the  
4 lower relative depreciation rates of water utilities is not a new phenomenon, as  
5 water utility depreciation rates have been consistently and significantly lower than  
6 those of the electric, combination electric and gas and natural gas utilities for the  
7 ten years ending 2010. Such low depreciation rates signify that the pressure on  
8 cash flows remains significantly greater for water utilities than for other types of  
9 utilities.

10 Water utility capital expenditures as large as those projected by the EPA  
11 and ASCE will require significant amounts of additional financing. The three  
12 sources typically used for financing are debt, equity (common and preferred) and  
13 cash flow. All three are intricately linked to the opportunity to earn a sufficient  
14 rate of return as well as the ability to achieve that return. Consistent with the  
15 previously cited Hope and Bluefield decisions, the return must be sufficient to  
16 maintain credit quality as well as enable the attraction of necessary new capital,  
17 be it debt or equity capital. If unable to raise debt or equity capital, the utility  
18 must turn to either retained earnings or free cash flow, both of which are directly  
19 linked to earning a sufficient rate of return. If either is inadequate, it will be nearly  
20 impossible for the utility to invest in needed infrastructure. Since all utilities  
21 typically experience negative free cash flows, it is clear that an insufficient rate of  
22 return can be financially devastating for a utility and for its customers, the  
23 ratepayers. Page 3 of Exhibit PMA-2 demonstrates that the free cash flows  
24 (funds from operations minus capital expenditures) of publicly-traded water  
25 utilities as a percent of total operating revenues has been consistently more  
26 negative than that of the electric, combination electric and gas and natural gas  
27 utilities for the ten years ended 2010. Magnifying the impact of water utilities'



1 negative free cash flow position is a continued inability to achieve what may  
2 already be an insufficient authorized rate of return on common equity as will be  
3 discussed later. AWC's 2010 earned ROE of 5.1% is well below both the earned  
4 ROEs and the authorized ROEs for not only the water utility industry, but for the  
5 electric, combination electric and gas, and the gas utility industries.

6 Consequently, as with the previously-discussed capital intensity and  
7 depreciation rates, significant capital expenditures relative to net plant, the  
8 consistently and more significantly negative free cash flow relative to operating  
9 revenues of water utilities, indicate greater investment risk for water utilities  
10 relative to electric, combination electric and gas and natural gas utilities.

11 In view of the foregoing, it is clear that the water and wastewater utility  
12 industry's high degree of capital intensity, low depreciation rates and significant  
13 negative free cash flow, coupled with the need for substantial infrastructure  
14 capital spending, requires regulatory support in the form of adequate and timely  
15 rate relief, including sufficient authorized returns on common equity as  
16 recognized by NARUC, so that water and wastewater utilities will be able to  
17 successfully meet the challenges they face.

18 **Q. ARE THERE OTHER INDICATIONS THAT THE WATER UTILITY INDUSTRY**  
19 **AS A WHOLE EXHIBITS MORE INVESTMENT RISK THAN THE ELECTRIC,**  
20 **COMBINATION ELECTRIC AND GAS AND NATURAL GAS UTILITY**  
21 **INDUSTRIES?**

22 **A.** Yes. Pages 4 through 13 of Exhibit PMA-2 present several such indications:  
23 total debt / earnings before interest, taxes, depreciation and amortization  
24 ("EBITDA"); funds from operations ("FFO") / total debt; funds from operations /  
25 interest coverage; before-income tax / interest coverage; earned returns on  
26 common equity ("ROE") and earned v. authorized ROEs for each utility industry  
27 for the ten years ended 2010. The increasing proportion of total debt to EBITDA  
28

1 for the water utilities indicates significantly increasing and greater financial risk  
2 for water utilities, which began the most recent ten years below that of electric,  
3 combination electric and gas and natural gas utilities.

4 S&P evaluates total debt as a percentage of EBITDA and FFO as a  
5 percentage of debt in the bond / credit rating process.<sup>8</sup> Page 4 of Exhibit PMA-2  
6 shows that total debt / EBITDA has risen steadily for water utilities for the ten  
7 years ended 2010, dropping only slightly for 2010. Notwithstanding the decline in  
8 2010, total debt / EBITDA is now higher than that for electric, combination electric  
9 and gas and natural gas utilities. Page 5 shows that FFO / total debt has steadily  
10 declined for water utilities over the decade ending 2010, while rising for the other  
11 utility groups. The consistently low level of FFO / total debt for the water utilities  
12 is a further indication of the pressures upon water utility cash flows and the  
13 increased relative investment risk which the water utility industry faces.

14 Pages 6 and 7 of Exhibit PMA-2 confirm the pressures upon both cash  
15 flows and income faced by water utilities. Page 6 shows that FFO / interest  
16 coverage for water, electric, combination electric and gas and natural gas utilities  
17 followed a similar pattern to FFO interest coverage for the ten years ended 2010.  
18 FFO interest coverage remained relatively consistent for water utilities, rising and  
19 falling between 2.0 and 3.0 times during the period. A similar pattern was  
20 exhibited by electric utilities. However, FFO / total debt for combination electric  
21 and gas as well as natural gas utilities rose during the ten years, exceeding that  
22 of water utilities significantly in 2009 and dropping back somewhat in 2010. Page  
23 7 shows that before-income tax interest coverage for water utilities also remained  
24 relatively stable, falling below that of gas utilities in 2002 and below that of  
25 electric and combination electric and gas utilities between 2005 and 2006, where  
26

27 <sup>8</sup> Standard & Poor's "Criteria Methodology: Business Risk / Financial Risk Matrix Expanded", May 27, 2009

1 it remained for the remainder of the ten years. In 2010, in all likelihood due to the  
2 "Great Recession" and the economy's currently nascent, fragile recovery from it,  
3 before-income tax interest coverage for water, electric and combination electric  
4 and gas utilities has converged at slightly lower than 3.0 times, while natural gas  
5 utilities continue to enjoy a significantly greater before-income tax interest  
6 coverage of approximately 4.25 times in 2010. Once again, the consistency and  
7 relatively low level of interest coverage ratios for water utilities are further  
8 indications of the pressures upon cash flow which water utilities face, confirming  
9 greater investment risk for water utilities relative to electric, combination electric  
10 and gas and natural gas utilities.

11 A final indication of the relative investment risk of water utilities compared  
12 with electric, combination electric and gas and natural gas utilities are trends in  
13 earned and authorized ROEs. As shown on page 8 of Exhibit PMA-2, earned  
14 ROEs, on average, for water utilities have generally been below those of electric,  
15 combination electric and gas and natural gas utilities during the ten years ended  
16 2010. They have consistently been lower for the last five years. However, such  
17 a comparison would not be complete without a comparison of earned ROEs with  
18 authorized ROEs, as shown on pages 9 through 13 of Exhibit PMA-2. The  
19 authorized ROEs are those reported in AUS Utility Reports for the last month of  
20 each year representing the authorized ROEs in effect during the previous year,  
21 rather than the outcomes of rate cases decided during the year. Hence, these  
22 authorized ROEs represent the revenue requirements of each year which give  
23 rise to the earned ROEs in each year. Water utilities generally, consistently and  
24 dramatically earned far below their authorized ROEs, while electric and  
25 combination electric and gas utilities earned above their authorized ROEs in  
26 some years, and fall short in others. In contrast, natural gas utilities generally,  
27 consistently and dramatically earned above their authorized ROEs.

1 Notwithstanding the closing of the gap between the average authorized  
2 ROEs for the various utility groups over the ten year period, for the majority of  
3 the period, water utilities have failed to earn their average authorized ROE, with  
4 earned ROEs significantly lower than authorized, a likely contributing factor to the  
5 greater risk indicated by the previously discussed coverage metrics.

6 As noted previously, AWC's 2010 earned ROE of 5.1% is well below both  
7 the earned ROEs and the authorized ROEs for not only the water utility industry  
8 but for the electric, combination electric and gas as well as the gas utility  
9 industries.

10 In addition, on a relative basis, water utilities on average are smaller in  
11 terms of market capitalization than electric, combination electric and gas and  
12 natural gas utilities, as demonstrated on page 13 of Schedule PMA-2, which  
13 shows the market capitalization of each utility for the ten years ended 2010. As  
14 noted by AWC witness Thomas M. Zepp on page 33, line 21 through page 34,  
15 line 2 of his direct testimony, AWC is significantly smaller than the average water  
16 company in his water utility sample.

17 **Q. PLEASE EXPLAIN WHY UTILITY SIZE HAS A BEARING ON BUSINESS**  
18 **RISK.**

19 **A.** It is conventional wisdom, supported by actual returns over time, that smaller  
20 companies tend to be more risky, causing investors to expect greater returns as  
21 compensation for that risk. Smaller companies are less able to cope with  
22 significant events which affect sales, revenues and earnings. For example, in  
23 general, the loss of revenues from a few larger customers would have a greater  
24 effect on a small company than on a much larger company with a larger, more  
25 diverse customer base. Moreover, smaller companies are generally less diverse  
26 in their operations as well as having less financial flexibility. In addition, the  
27 effect of extreme weather conditions, i.e., prolonged droughts or extremely wet  
28

1 weather, will have a greater affect upon a small operating water utility than upon  
2 a larger, more geographically diverse company.

3 Further evidence of the risk effects of size include the fact that investors  
4 demand greater returns to compensate for the lack of marketability and liquidity  
5 of the securities of smaller firms. It is a basic financial principle that it is the use  
6 of funds invested and not the source of those funds, which gives rise to the risk  
7 of any investment.<sup>9</sup> Therefore, because AWC's regulated jurisdictional rate base  
8 to which the overall cost of capital allowed by the Commission will be applied, the  
9 relevant risk reflected in the cost of capital must be that of AWC, including the  
10 impact of its small size on common equity cost rate.

11 In addition, Brigham<sup>10</sup> states:

12  
13 A number of researchers have observed that portfolios of small-  
14 firms have earned consistently higher average returns than those of  
15 large-firms stocks; this is called "small-firm effect." On the surface,  
16 it would seem to be advantageous to the small firms to provide  
17 average returns in a stock market that are higher than those of  
18 larger firms. In reality, it is bad news for the small firm; what *the*  
19 *small-firm effect means is that the capital market demands higher*  
20 *returns on stocks of small firms than on otherwise similar stocks of*  
21 *the large firms.* (italics added)

22 In view of all of the foregoing, it is clear that the investment risk of water  
23 utilities has increased over the last ten years, and that water utilities currently  
24 face greater investment risk relative to electric, combination electric and gas and  
25 natural gas utilities.

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26 <sup>9</sup> Brealey, Richard A. and Myers, Stewart C., Principles of Corporate Finance (McGraw-Hill Book Company,  
1988) 173 198.

27 <sup>10</sup> Brigham, Eugene F., Fundamentals of Financial Management, Fifth Edition (The Dryden Press, 1989) 623.

1 **IV. RUCO Witness Rigsby's Comments on DSIC**

2 **Q. MR. RIGSBY RECOMMENDS THAT THE COMPANY'S PROPOSED DSIC BE**  
3 **REJECTED FOR FOUR REASONS. PLEASE COMMENT.**

4 A. Mr. Rigsby provides these four reasons on page 4, line 16 through page 5, line 6  
5 of his Direct Testimony. They are as follows: 1) "AWC is seeking recovery of  
6 routine plant improvements outside of a rate case that would normally be  
7 recovered in a general rate case proceeding"; 2) "the DSIC is a one-sided  
8 mechanism which works only in the interest of the shareholder"; 3) "there is no  
9 federal or state requirement mandating the types of routine plant additions that  
10 AWC seeks recovery for through the Company-proposed DSIC"; and 4) "[A]WC  
11 has not proven that it would not be able to ensure safe and reliable water service  
12 or achieve cost recovery absent the DSIC." I will comment on each of these  
13 reasons in turn.

14 **Q. DO YOU AGREE WITH MR. RIGSBY THAT A VALID REASON FOR**  
15 **REJECTING THE COMPANY PROPOSED DSIC IS THAT THE**  
16 **REPLACEMENTS AND IMPROVEMENTS ARE ROUTINE?**

17 A. No. While it is true that these improvements may be considered a part of doing  
18 business, the magnitude of the improvements, the Company's distressed  
19 financial condition and need to attract capital on reasonable terms in competition  
20 with other firms in the capital markets as well as the fact that the magnitude of  
21 the improvements is in response to the ACC's water loss reduction directive are  
22 all evidence that the improvements covered by the DSIC are anything but  
23 "routine."

24 The fact that such mechanisms are in place in eleven states (CA, CT, DE,  
25 IL, IN, MO, NH, NJ<sup>11</sup>, NY, OH and PA) as shown on Exhibit PMA-4, are  
26

27 <sup>11</sup> In its November 9, 2011 press release announcing the proposal to draft rules for public comment upon a DSIC  
28 mechanism, the New Jersey Board of Public Utilities said "[p]lanned and accelerated investment in the aged

1 considered a "best practice" by NARUC itself (Exhibit PMA-3) and are  
2 considered by both Moody's and S&P, two of the major bond / credit rating  
3 agencies in the U.S., to be credit supportive are all independent indications that  
4 these improvements are anything but "routine."

5 **Q. WHAT DO THE MAJOR RATING AGENCIES SAY ABOUT DSIC AND DSIC-**  
6 **LIKE MECHANISMS?**

7 **A.** In Exhibit PMA-5, Moody's Global Infrastructure Finance December 2009 "Global  
8 Regulated Water Utilities" states the following on pages 11 and 26:

9  
10 In the U.S., Moody's views each state individually and considers the  
11 various factors that affect the utilities' profitability, including the type  
12 of fixed- versus variable-rate design allowed, historically authorized  
13 ROEs, and *the existence of riders or other mechanisms that permit*  
14 *recovery of operating and capital costs outside of a general rate*  
15 *case. (emphasis added) (p. 11)*

16 In the U.S., there are federal guidelines related to water quality but  
17 utilities are also subject to regulation at the state level for quality,  
18 service, and, importantly, rate-setting. Moody's views each state  
19 individually and considers the various factors that affect the utilities  
20 profitability including, the type of fixed- versus variable-rate design  
21 allowed, historically authorized ROEs, and *the existence of riders or*  
22 *other mechanism's that permit recovery of operating and capital*  
23 *costs outside of a general rate case. (emphasis added) (p. 26)*

24 And on page 21, Moody's states the following:

25 ...we view positively the financial flexibility enjoyed by a utility with  
26 limited capex requirements easily funded by internally generated  
27 cash flows.

28 In addition, S&P indicates that cost-recovery mechanisms, such as  
AWC's proposed DSIC mechanism, are supportive of credit quality which

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water infrastructure will improve reliability of the distribution system, and create well paying jobs. By reducing the likelihood for emergency repairs due to failures, costs will also be reduced." Board President Lee A. Solomon further stated "We need to begin to rebuild the system now to take advantage of capital costs being at historic lows, to create well paying jobs for New Jerseyans and to ensure customers have safe and reliable water for generations to come."

enhances a utility's ability to attract necessary new capital. S&P notes on page 3 of its "Industry Report Card: U.S. Investor-Owned Water Utilities Successfully Navigate Turbulent Financial Markets" (July 10, 2009), found in Exhibit PMA-6:

We also expect commissions to grant infrastructure cost recovery mechanisms, under which companies recover capital investments outside of traditional rate cases. Such mechanisms currently exist in California, Connecticut, Delaware, Illinois, Indiana, Missouri, New York, Ohio and Pennsylvania. In addition, utilities in other states have included infrastructure cost recovery mechanisms in pending rate cases. **Standard & Poor's views these measures as positive for credit quality because they bring additional stability to cash flows.**

S&P has also stated the following on page 4 of its "Industry Report Card: A Stable Industry Outlook Supports Solid Ratings For U.S. Regulated Gas And Water Utilities" (April 19, 2011), found in Exhibit PMA-7:

**Solid industry fundamentals support the stable outlooks**

**Regulation smoothes cash flows and supports cost recovery.** State regulation will continue to be an influential factor for gas and water utility credit ratings in 2011. Many recent regulatory developments have been positive for credit quality. While average returns on equity (ROE) have trended slightly downward, several jurisdictions have granted enhanced rate-making mechanisms that help ensure greater cash flow stability. Most important are rate "decoupling" and distribution system investment charge (DSIC) mechanisms. Rate decoupling protects a utility's financial performance when conservation leads to lower consumption as it essentially makes the utility whole by increasing customer charges to compensate for lower usage. The DSIC program, prevalent in the water sector, allows for rate increases for nonrevenue producing investments to replace aging infrastructure outside of general rate proceedings. **We expect capital spending in the water sector to continue on an upward trend due to a generally aging infrastructure and stringent water treatment and quality standards. The DSIC program would be especially helpful in our optimistic case if capital spending increased notably to avoid cash flow "lags," meaning that any revenue increases**



1 associated with today's capital spending would not need to  
2 wait until the next rate case. (emphasis added)

3 S&P is very clear that DSIC mechanisms are positive and credit  
4 enhancing. Although Moody's appears less clear on the subject, in my opinion,  
5 Moody's agrees that the existence of mechanisms such as the Company's  
6 proposed DSIC are supportive of improved credit quality, as such mechanisms  
7 allow utilities, including water utilities, to enjoy the financial flexibility to fund  
8 infrastructure replacements and improvements with a significant amount of  
9 internally generated cash. In addition, the judicial standards for a fair rate of  
10 return established in the Hope and Bluefield decisions, cited previously, require  
11 that the fair rate of return; 1) be comparable to the returns earned by other firms  
12 of similar risk, 2) assure confidence in the maintenance of financial integrity; 3)  
13 maintain and support credit quality, and 4) enable the utility to attract needed  
14 capital on reasonable terms in competition with firms of similar risk. Part of the  
15 fair rate of return, in my opinion, is the establishment of cost-recovery regulatory  
16 mechanisms, such as the Company's proposed DSIC mechanism, which will  
17 enhance AWC's financial integrity and enable it to attract needed new capital on  
18 reasonable terms.

19 **Q. WHAT DO THE RATINGS AGENCIES SAY ABOUT SPECIFIC UTILITIES**  
20 **REGARDING SUCH MECHANISMS?**

21 **A.** In Exhibit PMA-8 contains several S&P ratings reports for water utilities. A  
22 sampling of their comments are as follows:

23 S&P – Middlesex Water Co.:

24 "The DSIC was proposed in New Jersey, and the utility expects a  
25 decision by year-end 2011. An approval would be credit  
26 supportive to the utility (emphasis added) (p. 2 of Exhibit PMA-8)

1 S&P - Connecticut Water Service Inc.:

2 We view the DPUC's policies as **supportive of credit quality,**  
3 **including the surcharge mechanism, which allow the company**  
4 **to recover capital spending costs outside of traditional**  
5 **rate proceedings.** . . . The utility has benefited from a surcharge  
6 mechanism that allows recovery of costs associated with the  
7 replacement of aging infrastructure by adding an additional \$2.2  
8 million in revenues. (emphasis added) (p. 10 of Exhibit PMA-8)

9 S&P - California Water Service Co.:

10 The company's intermediate financial risk profile reflects stable  
11 regulated revenues, **timely recovery of capital spending,** and  
12 strong access to capital markets. . . . The California Public Utilities  
13 Commission. . . . **has granted a number of supportive cost-**  
14 **recovery mechanisms to allow the company to generate stable**  
15 **cash flows and recover costs with minimal regulatory lag.** . . .  
16 we still view California as mildly supportive because it has the most  
17 regulatory mechanisms than any other state. (emphasis added)  
18 (pp. 14-15 of Exhibit PMA-8)

19 S&P – Pennsylvania-American Water Co.:

20 . . . the Pennsylvania Public Utility Commission, **allows the**  
21 **addition of capital spending to rate base outside of traditional rate**  
22 **proceedings.** . . . A favorable competitive position, a diverse and  
23 supportive regulatory environment, and a stable, above-average  
24 service territory support AWW's [American Water Works] excellent  
25 business risk profile. AWW's regulatory framework includes  
26 reasonable allowed returns on equity and various cost-recovery  
27 mechanisms, **including incentives for infrastructure**  
28 **improvements.** (emphasis added) (p. 19 of Exhibit PMA-8)

S&P – New Jersey-American Water Co.:

. . . In addition, the company has **proposed the addition of**  
**infrastructure capital spending to rate base outside of traditional**  
**rate proceedings in its current rate filing.** . . . A favorable  
competitive position, a diverse and supportive regulatory  
environment, and a stable, above-average service territory support  
AWW's [American Water Works] excellent business risk profile.  
AWW's regulatory framework includes reasonable allowed returns  
on equity and various cost-recovery mechanisms, **including**

1 **incentives for infrastructure improvements**. (emphasis added)  
2 (p. 23 of Exhibit PMA-8)

3 S&P - Golden State Water Co. ("GSWC"):

4 The California Public Utilities Commission (CPUC) regulates  
5 GSWC. We view California as having a constructive regulatory  
6 environment for water companies. The CPUC **has granted a**  
7 **number of supportive cost-recovery mechanisms that allow**  
8 **water utilities to generate stable cash flows and recover costs**  
9 **with minimal regulatory lag. . . the CPUC allows the utility to**  
10 **recover its capital investment between rate cases . .** (emphasis  
11 added) (p. 27 of Exhibit PMA-8)

12 S&P – Aqua Pennsylvania Inc.:

13 Aqua Pennsylvania's excellent business risk profile reflects a low-  
14 risk monopoly water distribution business; **a supportive regulatory**  
15 **environment with favorable cost-recovery mechanisms that**  
16 **enhance cash flow predictability. . .**The Pennsylvania Public  
17 Utility Commission (PPUC) provided Aqua Pennsylvania with  
18 **favorable cost-recovery mechanism, including the addition of**  
19 **capital spending to rates outside the traditional rate**  
20 **proceedings. . .**(emphasis added) (p. 27 of Exhibit PMA-8)

21 S&P – United Waterworks, Inc.:

22 State commissions oversee UWR's [United Water Resources]  
23 regulated operations, and **supporting revenue and cash flow**  
24 **stability. . . Many of the company's operations benefit from**  
25 **cost-recovery mechanisms to recover capital spending**  
26 **outside of traditional rate proceedings. .** (emphasis added) (p.  
27 34 of Exhibit PMA-8)

28 S&P – San Jose Water Co.:

29 The California Public Utilities Commission (CPUC)( regulates San  
30 Jose Water, and has granted a **number of supportive cost-**  
31 **recovery mechanisms to allow it to generate stable cash flows**  
32 **and recover costs with minimal regulatory lag.** (emphasis  
33 added) (p. 37 of Exhibit PMA-8)

34 S&P – The Baton Rouge Water Works Co.:

1 BRWW's excellent business risk profile reflects a low-risk monopoly  
2 water distribution business, a **supportive regulatory environment**  
3 **with favorable cost-recovery mechanisms that enhance cash**  
4 **flow predictability**. (emphasis added) (p. 27 of Exhibit PMA-8)

5 It is abundantly clear that S&P views DSIC mechanisms as credit  
6 supportive and enhancing, promoting cash flow stability. In addition, S&P views  
7 cash flow stability as key to superior business risk profiles and enhanced bond /  
8 credit ratings, all of which enhance a utility's ability to attract needed new capital  
9 on reasonable terms in competition with companies of similar risk.

10 Q. PLEASE COMMENT UPON MR. RIGSBY'S SECOND REASON FOR HIS  
11 RECOMMENDATION THAT THE COMPANY'S PROPOSED DSIC BE  
12 REJECTED.

13 A. Mr. Rigsby's second reason for recommending the rejection of AWC's proposed  
14 DSIC is because, in his opinion, it "is a one-sided mechanism which works only  
15 in the interest of the shareholder." This is illogical and untrue for several  
16 reasons. First, as discussed previously in this rebuttal testimony, such  
17 mechanisms enhance the reliability and quality of water service through  
18 improved infrastructure which directly benefits customers. Such mechanisms will  
19 also help to lower operating costs in the long-term as the amount of lost water is  
20 reduced as a result of improved infrastructure. Also, mechanisms help to  
21 alleviate rate shock through gradual, small, regularly timed increases and not  
22 large increases at longer intervals. As Chairman Robert Powelson stated in his  
23 testimony before the Pennsylvania House of Representatives' Consumer Affairs  
24 Committee on April 28, 2011 (Exhibit PMA-9) relative to new ratemaking  
25 methods being considered in Pennsylvania:

26 By reducing regulatory lag and incenting investment in  
27 infrastructure, this **legislation will ensure that the utility**  
28 **infrastructure in the Commonwealth will be updated in an**

1 **expeditious manner, resulting in a safer and more reliable**  
2 **utility system.** (p. 3 of Exhibit PMA-9)

3 Relative to a DSIC mechanism, Chairman Powelson stated:

4 Another alternative ratemaking method that House Bill 1294 would  
5 allow the PUC to consider is an automatic adjustment charge that  
6 enables utilities to recover certain infrastructure improvement costs  
7 between base rate cases through a surcharge on customers' bills.  
8 This surcharge is often called a Distribution System Improvement  
9 Charge (DSIC) by the water and natural gas industry, and a  
10 Collection System Infrastructure Charge (CSIC) by the wastewater  
11 industry. **These surcharges ensure the least possible rate**  
12 **impact on customers by spreading out over time the cost of**  
13 **replacing and enhancing Pennsylvania's utility infrastructure.**  
14 (emphasis added) (p. 4 of Exhibit PMA-9)

15 Chairman Powelson also made a point of stating on page 5 of his  
16 testimony that the council of State Governments has included DSIC in its model  
17 legislation.

18 Most importantly, Chairman Powelson testified on the benefits to  
19 ratepayers (customers) of a DSIC mechanism when he stated:

20 In addition, the DSIC and CSIC will provide ratepayers with  
21 improved service quality and greater rate stability. By replacing  
22 aging infrastructure at an accelerated pace, there will be fewer  
23 main breaks, less frequent service interruptions, increased safety,  
24 and lower levels of unaccounted for natural gas and wastewater.  
25 The DSIC saves costs, not only in reducing frequency of rate  
26 cases, but by incenting capital investment to replace aging  
27 infrastructure. The infrastructure replacement encouraged by the  
28 DSIC would also help create hundreds of jobs – utility positions and  
pipeline contractors – needed to support the infrastructure  
replacement program. In light of today's difficult financial markets,  
**DSIC and CSIC are the type of innovative regulatory policies**  
**expected as rating agencies tighten their ratings benchmarks**  
**and are a key element in maintaining access to capital markets**  
**on reasonable terms.** (emphasis added) (pp. 6-7 of Exhibit  
PMA-9)

1 Q. PLEASE COMMENT UPON MR. RIGSBY'S THIRD "REASON" FOR HIS  
2 RECOMMENDATION THAT THE COMPANY'S PROPOSED DSIC BE  
3 REJECTED.

4 A. Mr. Rigsby's third reason for recommending the rejection of AWC's proposed  
5 DSIC is because "there is no federal or state requirement mandating the types of  
6 routine plant additions that AWC seeks recovery for through the Company-  
7 proposed DSIC". I disagree with this statement, as the ACC has directed AWC  
8 to reduce its water losses to less than 10% throughout its systems as noted by  
9 Mr. Garfield in his direct testimony at page 6, lines 13 – 14. Such a reduction  
10 cannot be accomplished without infrastructure repair and replacement. In this  
11 way, the requested DSIC is no different than the ACRM. The reduction of  
12 arsenic was mandated by a governmental authority, the Environmental  
13 Protection Agency, under the Safe Drinking Water Act and the request for a  
14 DSIC is, in part, in response to the ACC's directive to reduce water losses.  
15 Hence, Mr. Rigsby's third point of reasoning is incorrect.

16 Q. PLEASE COMMENT UPON MR. RIGSBY'S FOURTH "REASON" FOR HIS  
17 RECOMMENDATION THAT THE COMPANY'S PROPOSED DSIC BE  
18 REJECTED.

19 A. Mr. Rigsby's fourth reason for recommending the rejection of AWC's proposed  
20 DSIC is because AWC "has not proven that it would not be able to ensure safe  
21 and reliable water service or achieve cost recovery absent the DSIC." It is  
22 abundantly clear from the discussion regarding DSIC mechanisms enhancing  
23 safe and reliable water service previously in this rebuttal testimony, throughout  
24 the Company's direct testimony and in the exhibits accompanying this rebuttal  
25 testimony, that safe and reliable water service can be potentially compromised  
26 without such a mechanism.

1 In view of all the foregoing, including the Company's direct testimony  
2 regarding DSIC, it is my opinion that the DSIC mechanism should be adopted by  
3 the ACC as it will enhance the ability of AWC to provide safe and reliable water  
4 service, help reduce the Company's water losses, promote gradualism in rate  
5 increases and, finally, enhance the Company's financial position thus enhancing  
6 its financial integrity and its ability to attract needed new capital at reasonable  
7 costs.

8 **V. The Need for a Sufficient Authorized Rate of Return on Common Equity**

9 **Q. WHY IS IT PARTICULARLY CRITICAL THAT THE COMPANY BE**  
10 **AUTHORIZED A SUFFICIENT RATE OF RETURN ON COMMON EQUITY IN**  
11 **THIS PROCEEDING?**

12 A. The judicial standards for a fair rate of return established in the Hope and  
13 Bluefield decisions cited above, that the return be sufficient to maintain credit  
14 quality as well as enable the utility to attract new capital, are directly related to  
15 the Company's ability to undertake the level of capital expenditures it anticipates.  
16 This means that a DSIC mechanism is only part of the picture, as its benefits are  
17 meaningful only to the extent AWC's full cost of equity is reflected in rates. It is  
18 therefore necessary to authorize a DSIC in *conjunction* with a sufficient rate of  
19 return on common equity to enable the Company to raise the capital required to  
20 undertake these capital expenditures while maintaining its financial integrity.

21 **Q. WHAT ARE THE BENEFITS TO THE COMPANY OF BEING ALLOWED THE**  
22 **OPPORTUNITY TO EARN A SUFFICIENT ROE?**

23 A. The benefit to the Company of being allowed the opportunity to earn a sufficient  
24 ROE is that it provides the Company with improved cash flow, thus improving its  
25 creditworthiness as previously discussed, and the ability to improve its retained  
26 earnings balance which, in turn, will allow AWC to issue less long-term debt than  
27 would otherwise be necessary. If the Company needs to issue more long-term  
28

1 debt than otherwise, because the allowed ROE is insufficient, its financial risk will  
2 increase as well as both the cost of debt and its cost of common equity. This is  
3 consistent with the basic financial principle of risk and return, i.e., that the greater  
4 the perceived risk, the greater the investor required return.

5 As explained by Mr. Harris in his direct testimony at page 15, lines 19 –  
6 22, the Company's ability to issue new long-term debt to fund its infrastructure  
7 replacement program is already restricted because rising costs and declining  
8 customer sales have put pressure on AWC's ability to meet the minimum interest  
9 coverage provision of its General Mortgage Bond Indenture. It is therefore  
10 essential that AWC be allowed the opportunity to earn a sufficient ROE. Mr.  
11 Harris further notes on lines 24 – 27 on page 15 of his direct testimony, that the  
12 Company's infrastructure replacement program, which is "needed to ensure the  
13 integrity of its water distribution system," will increase the Company's debt, and,  
14 hence, financial risk, while increasing costs that "cannot be recovered under  
15 current rates." He concludes at page 15, line 27 through page 16, line 2, that  
16 AWC's "much-needed infrastructure replacement program cannot be undertaken  
17 without a change in the way these costs are recovered." In my opinion, the  
18 Company cannot undertake this Infrastructure replacement program unless it is  
19 allowed the opportunity to earn a sufficient ROE and the requested DSIC is  
20 adopted.

21 **Q. IN YOUR OPINION, WHAT IS A SUFFICIENT ROE?**

22 **A.** Without doing a complete rate of return study myself, I cannot recommend a  
23 specific ROE for AWC. However, Dr. Zepp's recommended ROE of 12.5%  
24 provides a reasonable, if not conservative, opportunity provided that AWC is able  
25 to earn its allowed ROE, for the Company to reduce the amount of long-term  
26 debt it needs to raise, while improving cash flows and providing additional  
27 retained earnings. To illustrate the effect of earning a sufficient ROE on the  
28



1 Company's cash flows and its ability to fund infrastructure replacements in this  
2 proceeding, the difference in revenue requirement between Mr. Cassidy's 9.1%  
3 recommended ROE and Dr. Zepp's recommended ROE of 12.5% is over \$1.1  
4 million annually.<sup>12</sup> All else equal, this revenue requirement differential translates  
5 directly to cash flows. The additional cash flows provided by Dr. Zepp's  
6 recommended ROE of 12.5% represent approximately 35% of the Company's  
7 estimated annual cost of infrastructure replacement requirements of \$3.1 million  
8 in its Eastern Group, as cited by Mr. Harris in his direct testimony at page 20,  
9 lines 13 – 17. Thus, Dr. Zepp's recommended ROE, as it relates to the  
10 magnitude of the infrastructure replacement requirements of the industry in  
11 general and AWC specifically, is reasonable in that it helps enable the Company  
12 to maintain creditworthiness by realizing the benefits discussed above.

13 **Q. DO YOU HAVE ANY FURTHER COMMENT UPON THE ADEQUACY OF ACC**  
14 **WITNESS CASSIDY'S AND RUCO WITNESS RIGSBY'S RECOMMENDED**  
15 **COMMON EQUITY COST RATES?**

16 **A.** Yes. Mr. Cassidy is recommending a common equity cost rate of 9.1% while Mr.  
17 Rigsby is recommending 9.3%. Both of these common equity cost rates are  
18 materially and significantly inadequate. The Predictive Risk Premium Model™  
19 ("PRPM™"), recently published in the *Journal of Regulatory Economics*  
20 ("*JRE*"),<sup>13</sup> can be used to provide an indication of this inadequacy. The PRPM™  
21 was developed from the work of Robert F. Engle who shared the Nobel Prize in  
22 Economics in 2003 "for methods of analyzing economic time series with time-  
23 varying volatility (ARCH)"<sup>14</sup> with "ARCH" standing for autoregressive conditional  
24

25 <sup>12</sup> Calculated as the difference between 12.5% and 9.1% multiplied by the portion of the Eastern Group's rate  
26 base that is funded by equity, or \$32,397,000 per Mr. Reiker's Exhibit JMR-RB1.

27 <sup>13</sup> "A New Approach for Estimating the Equity Risk Premium for Public Utilities", Pauline M. Ahern, Frank J.  
28 Hanley and Richard A. Michelfelder, Ph.D. *The Journal of Regulatory Economics* (December 2011), 40:261-  
278. (Exhibit PMA-10)

<sup>14</sup> www.nobelprize.org

1 heteroskedasticity. In other words, volatility changes over time and is related  
2 from one period to the next, especially in financial markets. Engle discovered  
3 that the volatility in prices and returns cluster over time. Therefore, high and low  
4 volatility periods can be used to predict equity risk premiums. The PRPM<sup>TM</sup>  
5 estimates the risk/return relationship directly, as the predicted equity risk  
6 premium is generated by the prediction of volatility, i.e., risk.

7 The inputs to the model are the historical returns on the common shares  
8 of each water company in both Mr. Cassidy's and Mr. Rigsby's water utility  
9 groups<sup>15</sup> minus the historical monthly yield on long-term U.S. Treasury securities  
10 through February 2012. Using a generalized form of ARCH, known as GARCH,  
11 each water company's projected equity risk premium was determined using  
12 Eviews<sup>®</sup> statistical software. The forecasted 30-year U.S. Treasury Bond  
13 ("Note") yield based upon the consensus forecast derived from the April 1, 2012  
14 Blue Chip, 3.58%, was then added to each company's PRPM<sup>TM</sup> derived equity  
15 risk premium. Exhibit PMA-11 presents the results for each company as well as  
16 each group's average. As shown on page 1, the average PRPM<sup>TM</sup> indicated  
17 common equity cost rates are 11.05% for Mr. Cassidy's water utility group and  
18 11.32% for Mr. Rigsby's water utility group. Moreover, because these common  
19 equity cost rates are based upon the market data of the two proxy groups of  
20 water companies, they reflect the investment risk of those proxy companies and  
21 do not reflect the additional investment risk of AWC as described by Company  
22 witness Thomas M. Zepp in his Direct Testimony at page 15, line 6 through page  
23 7, line 21 and again at page 40, line 22 through page 43, line 4. Consequently,

24  
25  
26 <sup>15</sup> I have not undertaken a PRPM<sup>TM</sup> analysis for Mr. Rigsby's natural gas distribution proxy group because, in  
27 my opinion, based upon the relative risk analysis discussed previously in this rebuttal testimony, the  
28 investment risk of the water utility industry is greater than that of the investment risk of the electric or gas  
utility industries.

common equity cost rates of 11.05% and 11.32% clearly demonstrate the inadequacy of Mr. Cassidy's recommended ROE of 9.1% and Mr. Rigsby's 9.3%.

**Q. DOES THAT CONCLUDE YOUR REBUTTAL TESTIMONY?**

**A. Yes.**

# APPENDIX

## A

**PROFESSIONAL QUALIFICATIONS  
OF  
PAULINE M. AHERN, CRRA  
PRINCIPAL  
AUS CONSULTANTS**

**PROFESSIONAL EXPERIENCE**

**1994-Present**

In 1996, I became a Principal of AUS Consultants, continuing to offer testimony as an expert witness on the subjects of fair rate of return, cost of capital and related issues before state public utility commissions. I provide assistance and support to clients throughout the entire ratemaking litigation process. In addition, I supervise the financial analyst and administrative staff in the preparation of fair rate of return and cost of capital exhibits which are filed along with expert testimony before various state and federal public utility regulatory bodies. The team also assists in the preparation of interrogatory responses, as well as rebuttal exhibits.

As the Publisher of AUS Utility Reports (formerly C. A. Turner Utility Reports), I am responsible for the production, publishing, and distribution of the reports. AUS Utility Reports provides financial data and related ratios for about 120 public utilities, i.e., electric, combination gas and electric, natural gas distribution, natural gas transmission, telephone, and water utilities, on a monthly, quarterly and annual basis. Among the subscribers of AUS Utility Reports are utilities, many state regulatory commissions, federal agencies, individuals, brokerage firms, attorneys, as well as public and academic libraries. The publication has continuously provided financial statistics on the utility industry since 1930.

As the Publisher of AUS Utility Reports, I also supervise the production, publishing, and distribution of the AGA Rate Service publications under license from the American Gas Association. I am also responsible for maintaining and calculating the performance of the AGA Index, a market capitalization weighted index of the common stocks of the approximately 70 corporate members of the AGA, which serves as the benchmark for the AGA Gas Utility Index Fund.

As an Assistant Vice President from 1994 - 1996, I prepared fair rate of return and cost of capital exhibits which were filed along with expert testimony before various state and federal public utility regulatory bodies. These supporting exhibits include the determination of an appropriate ratemaking capital structure and the development of embedded cost rates of senior capital. The exhibits also support the determination of a recommended return on common equity through the use of various market models, such as, but not limited to, Discounted Cash Flow analysis, Capital Asset Pricing Model and Risk Premium Methodology, as well as an assessment of the risk characteristics of the client utility. I also assisted in the preparation of responses to any interrogatories received regarding such testimonies filed on behalf of client utilities. Following the filing of fair rate of return testimonies, I assisted in the evaluation of opposition testimony in order to prepare interrogatory questions, areas of cross-examination, and rebuttal testimony. I also evaluated and assisted in the preparation of briefs and exceptions following the hearing process. I also submitted testimony before state public utility commissions regarding appropriate capital structure ratios and fixed capital cost rates.

**1990-1994**

As a Senior Financial Analyst, I supervised two analysts and assisted in the preparation of fair rate of return and cost of capital exhibits which are filed along with expert testimony before various state and federal public utility regulatory bodies. The team also assisted in the preparation of interrogatory responses.

I evaluated the final orders and decisions of various commissions to determine whether further actions were warranted and to gain insight which assisted in the preparation of future rate of return studies.

I assisted in the preparation of an article authored by Frank J. Hanley and A. Gerald Harris entitled "Does Diversification Increase the Cost of Equity Capital?" published in the July 15, 1991 issue of Public Utilities Fortnightly.

In 1992, I was awarded the professional designation "Certified Rate of Return Analyst" (CRRRA) by the National Society of Rate of Return Analysts (now the Society of Utility and Regulatory Financial Analysts (SURFA)). This designation is based upon education, experience and the successful completion of a comprehensive examination.

As Administrator of Financial Analysis for AUS Utility Reports, which then reported financial data for over 200 utility companies with approximately 1,000 subscribers, I oversaw the preparation of this monthly publication, as well as the accompanying annual publication, Financial Statistics - Public Utilities.

#### 1988-1990

As a Financial Analyst, I assisted in the preparation of fair rate of return studies including capital structure determination, development of senior capital cost rates, as well as the determination of an appropriate rate of return on equity. I also assisted in the preparation of interrogatory responses, interrogatory questions of the opposition, areas of cross-examination and rebuttal testimony. I also assisted in the preparation of the annual publication C. A. Turner Utility Reports - Financial Statistics - Public Utilities.

#### 1973-1975

As a Research Assistant in the Research Department of the Regional Economics Division of the Federal Reserve Bank of Boston, I was involved in the development and maintenance of econometric models to simulate regional economic conditions in New England in order to study the effects of, among other things, the energy crisis of the early 1970's and property tax revaluations on the economy of New England. I was also involved in the statistical analysis and preparation of articles for the New England Economic Review. Also, I was Assistant Editor of New England Business Indicators.

#### 1972

As a Research Assistant in the Office of the Assistant Secretary for International Affairs, U.S. Treasury Department, Washington, D.C., I developed and maintained econometric models which simulated the economy of the United States in order to study the results of various alternate foreign trade policies so that national trade policy could be formulated and recommended.

#### Clients Served

I have offered expert testimony before the following commissions:

Arkansas	Maryland
California	Michigan
Connecticut	Missouri
Delaware	Nevada
Florida	New Jersey
Hawaii	New York
Idaho	North Carolina
Illinois	Ohio
Indiana	Pennsylvania
Iowa	Rhode Island
Kentucky	South Carolina
Louisiana	Virginia
Maine	Washington

I have sponsored testimony on generic/uniform methodologies for determining the return on common equity for:

Aquarion Water Company  
The Connecticut Water Company

United Water Connecticut, Inc.  
Utilities, Inc.

I have sponsored testimony on the rate of return and capital structure effects of merger and acquisition issues for:

California-American Water Company

New Jersey-American Water Company

I have sponsored testimony on fair rate of return and related issues for:

Alpena Power Company  
Apple Canyon Utility Company  
Applied Wastewater Management, Inc.  
Aqua Illinois, Inc.  
Aqua New Jersey, Inc.  
Aqua North Carolina, Inc.  
Aqua Ohio, Inc.  
Aqua Virginia, Inc.  
Aquarion Water Company  
Artesian Water Company  
Bermuda Water Company  
The Atlantic City Sewerage Company  
Audubon Water Company  
The Borough of Hanover, PA  
Carolina Pines Utilities, Inc.  
Carolina Water Service, Inc. of NC  
Carolina Water Service, Inc. of SC  
The Columbia Water Company  
The Connecticut Water Company  
Consumers Illinois Water Company  
Consumers Maine Water Company  
Consumers New Jersey Water Company  
City of DuBois, Pennsylvania  
Elizabethtown Water Company  
Emporium Water Company  
GTE Hawaiian Telephone Inc.  
Greenridge Utilities, Inc.  
Illinois American Water Company  
Iowa American Water Company  
Water Services Corp. of Kentucky  
Lake Wildwood Utilities Corp.  
Land'Or Utility Company  
Long Island American Water Company  
Long Neck Water Company  
Louisiana Water Service, Inc.  
Massanutten Public Service Company  
Middlesex Water Company  
Missouri-American Water Company  
Mt. Holly Water Company  
Nero Utility Services, Inc.  
New Jersey Utilities Association  
The Newtown Artesian Water Company  
NRG Energy Center Pittsburgh LLC  
NRG Energy Center Harrisburg LLC  
Ohio-American Water Company  
Penn Estates Utilities  
Pinelands Water Company  
Pinelands Waste Water Company

Pittsburgh Thermal  
San Jose Water Company  
Southland Utilities, Inc.  
Spring Creek Utilities, Inc.  
Sussex Shores Water Company  
Tega Cay Water Service, Inc.  
Total Environmental Services, Inc. –  
Treasure Lake Water & Sewer Divisions  
Thames Water Americas  
Tidewater Utilities, Inc.  
Transylvania Utilities, Inc.  
Trigen – Philadelphia Energy Corporation  
Twin Lakes Utilities, Inc.  
United Utility Companies  
United Water Arkansas, Inc.  
United Water Arlington Hills Sewerage, Inc.  
United Water Connecticut, Inc.  
United Water Delaware, Inc.  
United Water Great Gorge Inc. / United Water  
Vernon Transmission, Inc.  
United Water Idaho, Inc.  
United Water Indiana, Inc.  
United Water New Jersey, Inc.  
United Water New Rochelle, Inc.  
United Water New York, Inc.  
United Water Owego / Nichols, Inc.  
United Water Pennsylvania, Inc.  
United Water Rhode Island, Inc.  
United Water South County, Inc.  
United Water Toms River, Inc.  
United Water Vernon Sewage Inc.  
United Water Virginia, Inc.  
United Water Westchester, Inc.  
United Water West Lafayette, Inc.  
United Water West Milford, Inc.  
Utilities, Inc.  
Utilities Inc. of Central Nevada  
Utilities, Inc. of Florida  
Utilities, Inc. of Louisiana  
Utilities, Inc. of Nevada  
Utilities, Inc. of Pennsylvania  
Utilities, Inc. - Westgate  
Utilities Services of South Carolina  
Utility Center, Inc.  
Valley Energy, Inc.  
Wellsboro Electric Company  
Western Utilities, Inc.

I have sponsored testimony on capital structure and senior capital cost rates for the following clients:

Alpena Power Company  
Arkansas-Western Gas Company  
Associated Natural Gas Company

PG Energy Inc.  
United Water Delaware, Inc.  
Washington Natural Gas Company

I have assisted in the preparation of rate of return studies on behalf of the following clients:

Algonquin Gas Transmission Company  
Anadarko Petroleum Corporation  
Arkansas-Louisiana Gas Company  
Arkansas Western Gas Company  
Artesian Water Company  
Associated Natural Gas Company  
Atlantic City Electric Company  
Bridgeport-Hydraulic Company  
Cambridge Electric Light Company  
Carolina Power & Light Company  
Citizens Gas and Coke Utility  
City of Vernon, CA  
Columbia Gas/Gulf Transmission Cos.  
Commonwealth Electric Company  
Commonwealth Telephone Company  
Conestoga Telephone & Telegraph Co.  
Connecticut Natural Gas Corporation  
Consolidated Gas Transmission Company  
Consumers Power Company  
CWS Systems, Inc.  
Delmarva Power & Light Company  
East Honolulu Community Services, Inc.  
Equitable Gas Company  
Equitrans, Inc.  
Florida Power & Light Company  
Gary Hobart Water Company  
Gasco, Inc.  
GTE Arkansas, Inc.  
GTE California, Inc.  
GTE Florida, Inc.  
GTE Hawaiian Telephone  
GTE North, Inc.  
GTE Northwest, Inc.  
GTE Southwest, Inc.  
Great Lakes Gas Transmission L.P.  
Hawaiian Electric Company  
Hawaiian Electric Light Company  
IES Utilities Inc.  
Illinois Power Company  
Interstate Power Company  
Interstate Power & Light Co.  
Iowa Electric Light and Power Company  
Iowa Southern Utilities Company  
Kentucky-West Virginia Gas Company  
Lockhart Power Company  
Middlesex Water Company

Milwaukee Metropolitan Sewer District  
Mountaineer Gas Company  
National Fuel Gas Distribution Corp.  
National Fuel Gas Supply Corp.  
Newco Waste Systems of NJ, Inc.  
New Jersey Natural Gas Company  
New Jersey-American Water Company  
New York-American Water Company  
North Carolina Natural Gas Corp.  
Northumbrian Water Company  
Ohio-American Water Company  
Oklahoma Natural Gas Company  
Orange and Rockland Utilities  
Paiute Pipeline Company  
PECO Energy Company  
Penn Estates Utilities, Inc.  
Penn-York Energy Corporation  
Pennsylvania-American Water Co.  
PG Energy Inc.  
Philadelphia Electric Company  
Providence Gas Company  
South Carolina Pipeline Company  
Southwest Gas Corporation  
Stamford Water Company  
Tesoro Alaska Petroleum Company  
Tesoro Refining & Marketing Co.  
United Telephone of New Jersey  
United Utility Companies  
United Water Arkansas, Inc.  
United Water Delaware, Inc.  
United Water Idaho, Inc.  
United Water Indiana, Inc.  
United Water New Jersey, Inc.  
United Water New York, Inc.  
United Water Pennsylvania, Inc.  
United Water Virginia, Inc.  
United Water West Lafayette, Inc.  
Utilities, Inc. of Pennsylvania  
Utilities, Inc. - Westgate  
Vista-United Telecommunications Corp.  
Washington Gas Light Company  
Washington Natural Gas Company  
Washington Water Power Corporation  
Waste Management of New Jersey –  
Transfer Station A



(Rate of Return Study Clients Continued)

Wellsboro Electric Company  
Western Reserve Telephone Company

Western Utilities, Inc.  
Wisconsin Power and Light Company

**EDUCATION:**

1973 – Clark University – B.A. – Honors in Economics (Concentration: Econometrics and Regional/International Economics)  
1991 – Rutgers University – M.B.A. – High Honors (Concentration: Corporate Finance)

**PROFESSIONAL AFFILIATIONS:**

American Finance Association  
Financial Management Association  
Society of Utility and Regulatory Financial Analysts  
Member, Board of Directors – 2010-2012  
President – 2006-2008 and 2008-2010  
Secretary/Treasurer – 2004-2006  
Energy Association of Pennsylvania  
National Association of Water Companies – Member of the Finance/Accounting/Taxation Committee

**SPEAKING ENGAGEMENTS:**

"A New Approach for Estimating the Equity Risk Premium Applied to Public Utilities", (co-presenter with Frank J. Hanley, Principal and Director, AUS Consultants) before the Water Committee of the National Association of Regulatory Utility Commissioners' Winter Committee Meetings, February 7, 2012, Washington, DC.

"A New Approach for Estimating the Equity Risk Premium Applied to Public Utilities", (co-presenter with Richard A. Michelfelder, Ph.D., Rutgers University and Frank J. Hanley, Principal and Director, AUS Consultants) before the Wall Street Utility Group, December 19, 2011, New York City, NY.

"Advanced Cost and Finance Issues for Water", (co-presenter with Gary D. Shambaugh, Principal & Director, AUS Consultants), 2011 Advanced Regulatory Studies Program – Ratemaking, Accounting and Economics, September 29, 2011, Kellogg Center at Michigan State University – Institute for Public Utilities, East Lansing, MI.

"Public Utility Betas and the Cost of Capital", (co-presenter with Richard A. Michelfelder, Ph.D., Rutgers University) – Advanced Workshop in Regulation and Competition, 30<sup>th</sup> Annual Eastern Conference of the Center for Research in Regulated Industries (CRRI), May 20, 2011, Rutgers University, Skytop, PA.

Moderator: Society of Utility and Regulatory Financial Analysts: 43<sup>rd</sup> Financial Forum – "Impact of Cost Recovery Mechanisms on the Perception of Public Utility Risk", April 14-15, 2011, Washington, DC.

"A New Approach for Estimating the Equity Risk Premium for Public Utilities", (co-presenter with Richard A. Michelfelder, Ph.D., Rutgers University) – Hot Topic Hotline Webinar, December 3, 2010, Financial Research Institute of the University of Missouri.

"A New Approach for Estimating the Equity Risk Premium for Public Utilities", (co-presenter with Richard A. Michelfelder, Ph.D., Rutgers University) before the Indiana Utility Regulatory Commission Cost of Capital Task Force, September 28, 2010, Indianapolis, IN

Tomorrow's Cost of Capital: Cost of Capital Issues 2010, Deloitte Center for Energy Solutions, 2010 Deloitte Energy Conference, "Changing the Great Game: Climate, Customers and Capital", June 7-8, 2010, Washington, DC.

"Cost of Capital Issues – 2010" – Deloitte Center for Energy Solutions 2010 Energy Conference: Changing the Great Game: Climate, Consumers and Capital, June 7-8, 2010, Washington, DC

"A New Approach for Estimating the Equity Risk Premium for Public Utilities", (co-presenter with Richard A. Michelfelder, Ph.D., Rutgers University) – Advanced Workshop in Regulation and Competition, 29<sup>th</sup> Annual Eastern Conference of the Center for Research in Regulated Industries (CRRl), May 20, 2010, Rutgers University, Skytop, PA

Moderator: Society of Utility and Regulatory Financial Analysts: 42<sup>nd</sup> Financial Forum – "The Changing Economic and Capital Market Environment and the Utility Industry", April 29-30, 2010, Washington, DC

"A New Model for Estimating the Equity Risk Premium for Public Utilities" (co-presenter with Richard A. Michelfelder, Ph.D., Rutgers University) – Spring 2010 Meeting of the Staff Subcommittee on Accounting and Finance of the National Association of Regulatory Utility Commissioners, March 17, 2010, Charleston, SC

"New Approach to Estimating the Cost of Common Equity Capital for Public Utilities" (co-presenter with Richard A. Michelfelder, Ph.D., Rutgers University) - Advanced Workshop in Regulation and Competition, 28<sup>th</sup> Annual Eastern Conference of the Center for Research in Regulated Industries (CRRl), May 14, 2009, Rutgers University, Skytop, PA

Moderator: Society of Utility and Regulatory Financial Analysts: 41<sup>st</sup> Financial Forum – "Estimating the Cost of Capital in Today's Economic and Capital Market Environment", April 16-17, 2009, Washington, DC

"Water Utility Financing: Where Does All That Cash Come From?", AWWA Pre-Conference Workshop: Water Utility Ratemaking, March 25, 2008, Atlantic City, NJ

#### PAPERS:

"A New Approach for Estimating the Equity Risk Premium for Public Utilities", co-authored with Frank J. Hanley and Richard A. Michelfelder, Ph.D., Rutgers University, The Journal of Regulatory Economics (December 2011), 40:261-278.

"Comparable Earnings: New Life for an Old Precept" co-authored with Frank J. Hanley, Financial Quarterly Review, (American Gas Association), Summer 1994.

**PMA-1**

2009  
REPORT  
CARD  
★★★★ for ★★★★★  
americas  
INFRASTRUCTURE

American Society of Civil Engineers  
March 25, 2009  
[www.asce.org/reportcard](http://www.asce.org/reportcard)

# EXECUTIVE SUMMARY

## TRENDS IN THE GRADES

Grades ranged from a high of C+ for solid waste to a low of D- for drinking water, inland waterways, levees, roads, and wastewater. U.S. surface transportation and aviation systems declined over the past four years, with aviation and transit dropping from a D+ to D, and roads dropping from a D to a nearly failing D-.

Showing no significant improvement since the last report, the nation's bridges, public parks and recreation, and rail remained at a grade of C, while dams, hazardous waste, and schools remained at a grade of D, and drinking water and wastewater remained at a grade of D-. Levees, the newest category, debuted on the 2009 *Report Card* at a barely passing grade of D-.

Just one category—energy—improved since 2005, raised its grade from D to D+.

### Water and Environment

**DAMS:** As dams age and downstream development increases, the number of deficient dams has risen to more than 4,000, including 1,819 high hazard dams. Over the past six years, for every deficient, high hazard potential dam repaired, nearly two more were declared deficient. There are more than 85,000 dams in the U.S., and the average age is just over 51 years old. Because of the lack of progress made in repairing and rehabilitating the

nation's dams, this category again earned a grade of D.

**DRINKING WATER:** Drinking water again earned a D-. America's drinking water systems face an annual shortfall of at least \$11 billion to replace aging facilities that are near the end of their useful life and to comply with existing and future federal water regulations. This does not account for growth in the demand for drinking water over the next 20 years. Leaking pipes lose an estimated seven billion gallons of clean drinking water a day. Although Americans still enjoy some of the best tap water in the world, the costs of treating and delivering that water where it is needed continue to outpace the funds available to sustain the system.

**HAZARDOUS WASTE:** Hundreds of thousands of contaminated sites exist across the country, representing millions of dollars of untapped economic potential. Redevelopment of brownfield sites over the past five years generated an estimated 191,338 new jobs and \$408 million annually in extra revenues for localities. In 2008, however, there were 188 U.S. cities with brownfield sites awaiting cleanup and redevelopment. Additionally, federal funding for "Superfund" cleanup of the nation's worst toxic waste sites has declined steadily, dropping to \$1.08 billion

**TABLE A ★ 2009 Report Card for  
America's Infrastructure**

Aviation	<b>D</b>
Bridges	<b>C</b>
Dams	<b>D</b>
Drinking Water	<b>D-</b>
Energy	<b>D+</b>
Hazardous Waste	<b>D</b>
Inland Waterways	<b>D-</b>
Levees	<b>D-</b>
Public Parks and Recreation	<b>C-</b>
Rail	<b>C-</b>
Roads	<b>D-</b>
Schools	<b>D</b>
Solid Waste	<b>C+</b>
Transit	<b>D</b>
Wastewater	<b>D-</b>

**AMERICA'S  
INFRASTRUCTURE G.P.A.**

**D**

**ESTIMATED 5 YEAR  
INVESTMENT NEED**

**\$2.2  
TRILLION**

**NOTES** Each category was evaluated on the basis of capacity, condition, funding, future need, operation and maintenance, public safety and resilience

**A = Exceptional  
B = Good  
C = Mediocre  
D = Poor  
F = Failing**

in 2008, its lowest level since 1986. Since little has been done to clean up these sites since the last *Report Card*, hazardous waste again earned a grade of D.

**LEVEES:** The *Report Card's* new category, levees, earned a D-. More than 85% of the nation's estimated 100,000 miles of levees are locally owned and maintained. The reliability of many of these levees is unknown. Many are more than 50 years old and were originally built to protect crops from flooding. With an increase in development behind these levees, the risk to public health and safety from failure has increased. Rough estimates put the cost at more than \$100 billion to repair and rehabilitate the nation's levees.

**SOLID WASTE:** The category that has consistently had the highest grade on the *Report Card for America's Infrastructure* is solid waste, again earning the highest grade of C+. In 2007, the U.S. produced 254 million tons of municipal solid waste. More than a third was recycled or recovered, representing a 7% increase since 2000. Per capita generation of waste has remained relatively constant over the last 20 years. Despite those successes, the increasing volume of electronic waste and lack of uniform regulations for its disposal creates the potential for high levels of hazardous materials and heavy metals in the nation's landfills, posing a significant threat to public safety.

**WASTEWATER:** Aging systems discharge billions of gallons of untreated wastewater into U.S. surface waters each

year. The U.S. Environmental Protection Agency estimates that the nation must invest \$390 billion over the next 20 years to update or replace existing systems and build new ones to meet increasing demand. Wastewater continues to be among the lowest grades on the *Report Card*, again earning a D- in 2009.

## Transportation

**AVIATION:** Despite surging oil prices, volatile credit markets, and a lagging economy, the Federal Aviation Administration projects a 3% annual growth in air travel. Travelers will be faced with increasing delays and inadequate conditions as a result of the long overdue need to modernize the outdated air traffic control system and the failure to enact a federal aviation program. The increasing delays and the lack of new authorization for federal aviation programs have caused aviation's grade to slip to a D in 2009.

**BRIDGES:** More than 26%—more than one in four—of the nation's bridges are either structurally deficient or functionally obsolete. While some progress has been made in recent years to reduce the number of deficient and obsolete bridges in rural areas, the number in urban areas is rising. A \$17 billion annual investment is needed to substantially improve current bridge conditions. Currently, only \$10.5 billion is spent annually on the construction and maintenance of bridges. There have been no substantial improvements in bridge condition since the last *Report Card*, keeping the grade at a C for 2009.

**INLAND WATERWAYS:** The nation's waterways offer an efficient and environmentally friendly way to move goods across the country. The average tow barge can carry the equivalent of 870 tractor trailer loads. Of the 257 locks still in use on the nation's inland waterways, 30 were built in the 1800s and another 92 are more than 60 years old. The average age of all federally owned or operated locks is nearly 60 years, well past their planned design life of 50 years. The cost to replace the present system of locks is estimated at more than \$125 billion. Despite the economic savings waterways can offer, little has been done to improve their condition since 2005, leaving this category at a grade of D-.

**RAIL:** A freight train is three times as fuel efficient as a truck, and traveling by passenger rail uses 20% less energy per mile than traveling by car. However, growth and changes in demand create bottlenecks that constrain traffic in critical areas. Freight and passenger rail generally share the same network, and a significant potential increase in passenger rail demand will add to the freight railroad capacity challenges. More than \$200 billion is needed through 2035 to accommodate anticipated growth. Similar to the nation's inland waterways, rail offers enormous economic and environmental potential, but few improvements have been made since 2005. This category again rates at a C-.

**ROADS:** Congestion on the nation's roads is increasing and the cost to improve is ever rising, causing the roads grade to

decrease to a D- in 2009. Americans spend 4.2 billion hours a year stuck in traffic at a cost to the economy of \$78.2 billion, or \$710 per motorist. Poor conditions cost motorists \$67 billion a year in repairs and operating costs. One-third of America's major roads are in poor or mediocre condition and 45% of major urban highways are congested. Current spending of \$70.3 billion per year for highway capital improvements is well below the estimated \$186 billion needed annually to substantially improve conditions.

**TRANSIT:** Transit use increased 25% between 1995 and 2005, faster than any other mode of transportation. However, nearly half of American households do not have access to bus or rail transit, and only 25% have what they consider to be a good alternative. The Federal Transit Administration estimates that \$15.8 billion is needed annually to maintain conditions and \$21.6 billion is needed to improve to good conditions. In 2008, federal capital outlays for transit were only \$9.8 billion. Since investment in transit has not kept pace with its growing needs, the 2009 grade has dropped to a D.

## Public Facilities

**PUBLIC PARKS AND RECREATION:** Parks, beaches, and other recreational facilities contribute \$730 billion per year to the U.S. economy, support nearly 6.5 million jobs, and contribute to cleaner air and water and higher property values. Despite record spending on parks at the state and local level, the acreage of park-

land per resident in urban areas is declining. While significant investments are being made in the National Park Service for its 2016 centennial, the agency's facilities still face a \$7-billion maintenance backlog. Even though some progress has been made since 2005 to improve the nation's parkland, lagging public investment means that public parks and recreation still earns a grade of C- in 2009.

**SCHOOLS:** Spending on the nation's schools grew from \$17 billion in 1998 to a peak of \$29 billion in 2004. However, by 2007 spending fell to \$20.28 billion. No comprehensive, authoritative nationwide data on the condition of America's school buildings have been collected in a decade. The National Education Association's best estimate to bring the nation's schools into good repair is \$322 billion. Without up-to-date data, the true extent of the problems facing the nation's schools cannot be known, and therefore schools once again receive a grade of D.

## Energy

**ENERGY:** Progress has been made in grid reinforcement since 2005, and substantial investment in generation, transmission, and distribution is expected over the next two decades. Demand for electricity has grown by 25% since 1990. Public and government opposition and difficulty in the permitting processes are restricting much needed modernization. Projected electric utility investment needs could be as much as \$1.5 trillion by 2030. The increase to a grade of D+ is largely due to anticipated



investments in improvements over the next two decades, which began in 2005.

## RAISING THE GRADES: SOLUTIONS

The nation's infrastructure faces some very real problems that threaten our way of life if they are not addressed. These problems are solvable if we have the needed vision and leadership. Raising the grades on our infrastructure will require that we seek and adopt a wide range of structural and non-structural solutions in every category, including technical advances, funding and regulatory changes, and changes in public behavior and support.

ASCE has developed five key solutions to begin raising the grades. They are:

- ★ **INCREASE** federal leadership in infrastructure to address the crisis;
- ★ **PROMOTE** sustainability and resilience in infrastructure to protect the natural environment and withstand natural and man-made hazards;
- ★ **DEVELOP** national, state, and regional infrastructure plans that complement a national vision and focus on system-wide results;
- ★ **ADDRESS** life-cycle costs and ongoing maintenance to meet the needs of current and future users;
- ★ **INCREASE** and improve infrastructure investment from all stakeholders.

## RAISING THE GRADES: CASE STUDIES

While the conditions listed in the *Report Card* mean low grades for all categories, there are positive examples from across the country that demonstrate some progress is being made. Throughout the report, case studies of how public and private organizations have addressed specific problems are included to demonstrate how these innovative solutions can be applied on a larger scale. The case studies for each category may not contribute to an overall improvement of the grade, but they illustrate that the problems facing the nation's infrastructure are solvable with some creativity and determination.

## HISTORY

The concept for a report card to grade the nation's infrastructure originated in 1988 with a congressionally chartered commission, the National Council on Public Works Improvement. Titled *Fragile Foundations: A Report on America's Public Works*, the council's report issued recommendations on how to improve the nation's infrastructure. As a way to guide the study, the authors used the report card concept to establish a baseline evaluation of the infrastructure. This first report card included eight categories of infrastructure and assigned letter grades on the basis of performance and capacity of existing public works.

In 1988, when the report was released, the nation's infrastructure earned a "C," representing an average grade. Among the problems identified within *Fragile Foundations* were increasing congestion and



**ABOVE:** Crews work to rescue stranded drivers after a major water main broke in Montgomery County, Maryland on December 23, 2008. Photo courtesy of *The Gazette / Gazette.Net*.

deferred maintenance and age of the system; the authors of the report worried that fiscal investment was inadequate to meet the current operations costs and future demands on the system. Since 1998 ASCE has released four *Report Cards* and found each time that these same problems persist.

## METHODOLOGY

The *Report Card* advisory council comprises 28 engineers with expertise in the disciplines represented in the report. For nearly a year the council worked to analyze current data and conditions within the 15 categories, consult with additional technical and industry experts, and assess and assign grades.

In assigning grades, the council considered several fundamental criteria. These

included capacity, condition, operations and maintenance, current and future funding, public safety, and resilience. The grade determination was based on both publicly available data and the subjective judgments of the engineers serving on the advisory council.

The 2005 *Report Card* featured a category called “Security” that sought to rate the ability of infrastructure to meet man-made threats. In the four years since that report, engineers have begun to look at security in the context of infrastructure’s overall resilience—or the ability to withstand and recover from both natural and man-made hazards. Since the likelihood of natural disaster is sometimes much higher than that of a man-made threat, and resilience must be determined on a system by system basis, the 2009 *Report Card* now incorporates resilience as a grading factor in each category.

## THE NEED FOR INVESTMENT

In 2009, ASCE estimates that \$2.2 trillion needs to be invested over five years to bring the condition of the nation’s infrastructure up to a good condition—an increase of more than half a trillion dollars since the 2005 *Report Card*’s estimate of \$1.6 trillion. This number, adjusted for a 3% rate of inflation, represents capital spending at all levels of government and includes what is already being spent. Current spending amounts to only about half of the needed investment, which means the U.S. must invest an additional \$1.1 billion over the next five years. ★

**TABLE B ★ Estimated 5-Year Investment Needs in Billions of Dollars**

CATEGORY	5-YEAR NEED (BILLIONS)	ESTIMATED ACTUAL SPENDING *	AMERICAN RECOVERY AND REINVESTMENT ACT (P.L. III-005)	FIVE-YEAR INVESTMENT SHORTFALL
Aviation	87	45	1.3	(40.7)
Dams	12.5	5	0.05	(7.45)
Drinking Water and Wastewater	255	140	6.4	(108.6)
Energy	75	34.5	11	(29.5)
Hazardous Waste and Solid Waste	77	32.5	1.1	(43.4)
Inland Waterways	50	25	4.475	(20.5)
Levees	50	1.13	0	(1.13)
Public Parks and Recreation	85	36	0.835	(48.17)
Rail	63	42	9.3	(11.7)
Roads and Bridges	930	351.5	27.5	(549.5)
Discretionary grants for surface transportation			1.5	
Schools	160	125	0**	(35)
Transit	265	66.5	8.4	(190.1)
	<b>2.122 trillion***</b>	<b>903 billion</b>	<b>71.76 billion</b>	<b>(1.176 trillion)</b>
<b>Total Need**** \$2.2 trillion</b>				

\* 5 year spending estimate based on the most recent available  
spending at all levels of government and not indexed for inflation  
 \*\* The American Recovery and Reinvestment Act included \$53.6 billion  
 for a State Fiscal Stabilization Fund for education, as of press time,  
 it was not known how much would be spent on school infrastructure.  
 \*\*\* Not adjusted for inflation  
 \*\*\*\* Assumes 3% annual inflation

**SOURCES** For source information see page 150.



# WATER AND ENVIRONMENT DRINKING WATER | 2009 GRADE | **D-**

## RAISING THE GRADES SOLUTIONS THAT WILL WORK **NOW**

**A** ■ Exceptional  
**B** ■ Good  
**C** = Mediocre  
**D** = Poor  
**F** = Failing

AMERICA'S  
INFRASTRUCTURE  
G.P.A.

**D**

ESTIMATED 5-YEAR FUNDING  
REQUIREMENTS FOR  
**DRINKING WATER AND  
WASTEWATER**

Total investment needs  
**\$255 BILLION**

Estimated spending

**\$146.4 BILLION**

Projected shortfall

**\$108.6 BILLION**



- ★ **INCREASE** funding for water infrastructure system improvements and associated operations through a comprehensive federal program;
- ★ **CREATE** a Water Infrastructure Trust Fund to finance the national shortfall in funding of infrastructure systems under the Clean Water Act and the Safe Drinking Water Act, including storm-water management and other projects designed to improve the nation's water quality;
- ★ **EMPLOY** a range of financing mechanisms, such as appropriations from general treasury funds, issuance of revenue bonds and tax exempt financing at state and local levels, public-private partnerships, state infrastructure banks, and user fees on certain consumer products as well as innovative financing mechanisms, including broad-based environmental restoration taxes to address problems associated with water pollution, wastewater management and treatment, and storm-water management.

## CONDITIONS

The nation's drinking-water systems face staggering public investment needs over the next 20 years. Although America spends billions on infrastructure each year, drinking water systems face an annual shortfall of at least \$11 billion in funding needed to replace aging facilities that are near the end of their useful life and to comply with existing and future federal water regulations. The shortfall does not account for any growth in the demand for drinking water over the next 20 years.<sup>2</sup>

Of the nearly 53,000 community water systems, approximately 83% serve 3,300 or fewer people. These systems provide water to just 9% of the total U.S. population served by all community systems. In contrast, 8% of community water systems serve more than 10,000 people and provide water to 81% of the population served. Eighty-five percent (16,348) of nontransient, noncommunity water systems and 97% (83,351) of transient noncommunity water systems serve 500 or fewer people. These smaller systems face huge financial, technological, and managerial challenges in meeting a growing number of federal drinking-water regulations.

In 2002, the U.S. Environmental Protection Agency (EPA) issued The Clean Water and Drinking Water Infrastructure Gap Analysis, which identified potential funding gaps between projected needs and spending from 2000 through 2019. This analysis estimated a potential 20-year funding gap for drinking water capital expenditures as well as operations and

maintenance, ranging from \$45 billion to \$263 billion, depending on spending levels. Capital needs alone were pegged at \$161 billion.<sup>2</sup>

The Congressional Budget Office (CBO) concluded in 2003 that "current funding from all levels of government and current revenues generated from ratepayers will not be sufficient to meet the nation's future demand for water infrastructure." The CBO estimated the nation's needs for drinking water investments at between \$10 billion and \$20 billion over the next 20 years.<sup>3</sup>

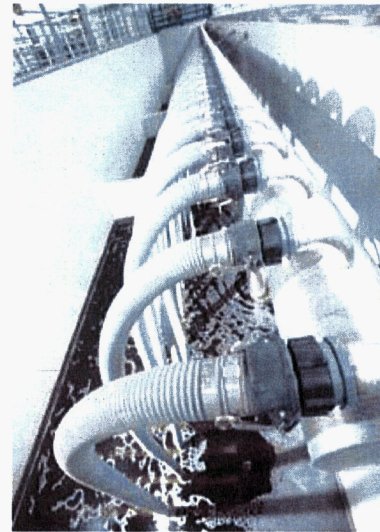
In 1996, Congress enacted the drinking-water state revolving loan fund (SRF) program. The program authorizes the EPA to award annual capitalization grants to states. States then use their grants (plus a 20% state match) to provide loans and other assistance to public water systems. Communities repay loans into the fund, thus replenishing the fund and making resources available for projects in other communities. Eligible projects include installation and replacement of treatment facilities, distribution systems, and some storage facilities. Projects to replace aging infrastructure are eligible if they are needed to maintain compliance or to further public health protection goals.

Federal assistance has not kept pace with demand, however. Between FY 1997 and FY 2008, Congress appropriated approximately \$9.5 billion for the SRF. This 11-year total is only slightly more than the annual capital investment gap for each of those years as calculated by the EPA in 2002.

## RAISING THE GRADES CASE STUDIES

### ORANGE COUNTY, CA ★ Groundwater Replenishment System

The California Department of Water Resources predicts that by 2020, the entire state will experience water shortages equal to the needs of 4 to 12 million families of four for one year. To meet growing demand and reduce reliance on water imported from northern California and the Colorado River, the Orange County Water District developed the Groundwater Replenishment (GWR) System that takes highly treated sewer water and purifies it to levels that meet state and federal drinking water standards. GWR System water will be between 35% to 75% cheaper than water produced by seawater desalination and the purification process will consume about half the energy. *Photos courtesy of Orange County Water District.*





**TABLE 2.1 ★ Design Life of Drinking Water Systems**

COMPONENTS	YEARS OF DESIGN LIFE
Reservoirs and Dams	50–80
Treatment Plants—Concrete Structures	60–70
Treatment Plants—Mechanical and Electrical	15–25
Trunk Mains	65–95
Pumping Stations—Concrete Structures	60–70
Pumping Stations—Mechanical and Electrical	25
Distribution	60–95

**SOURCE** US EPA Clean Water and Drinking Water Infrastructure Gap Analysis Report, September 2002

**TABLE 2.2 ★ Water Usage: 1950 and 2000**

	1950	2000	PERCENT CHANGE
Population (Millions)	93.4	242	159%
Usage (Billions of Gallons per Day)	14	43	207%
Per Capita Usage (Gallons per Person per Day)	149	179	20%

**SOURCE** US EPA Clean Water and Drinking Water Infrastructure Gap Analysis Report, September 2002

## RESILIENCE

Drinking water systems provide a critical public health function and are essential to life, economic development, and growth. Disruptions in service can hinder disaster response and recovery efforts, expose the public to water-borne contaminants, and cause damage to roadways, structures, and other infrastructure, endangering lives and resulting in billions of dollars in losses.

The nation's drinking-water systems are not highly resilient; present capabilities to prevent failure and properly maintain or reconstitute services are inadequate. Additionally, the lack of investment and the interdependence on the energy sector contribute to the lack of overall system resilience. These shortcomings are currently being addressed through the construction of dedicated emergency power generation at key drinking water utility facilities, increased connections with adjacent utilities for emergency supply, and the development of security and criticality criteria. Investment prioritization must take into consideration system vulnerabilities, interdependencies, improved efficiencies in water usage via market incentives, system robustness, redundancy, failure consequences, and ease and cost of recovery.

The question is not whether the federal government should take more responsibility for drinking water improvements but how it should take more responsibility.



## RAISING THE GRADES CASE STUDIES

### LOUISVILLE, KY ★ American Recovery and Reinvestment Act Funding

The Louisville Water Company has proposed \$11 million in projects that could be funded as part of the 2009 American Recovery and Reinvestment Act (P.L. 111-005). The projects would rehabilitate 75 miles of water main to extend the useful life of the system and reduce water main breaks. In addition, 9.5 miles of water main would be replaced to improve water quality, fire hydrant flow and reduce maintenance. Together, the projects would support 101 jobs.

### PORT ANGELES, WA ★ Downtown Water Main Project

In 2008, the City of Port Angeles completed a project to replace the water mains and sidewalks in the downtown area. The replacement water mains bring the city's downtown area to a service level that meets current fire flow standards, reduces seismic risks and helps prevent water main failures due to age. The original water mains were installed in 1914. In conjunction with the water main replacement, many sidewalks were replaced with pavers that enhance the downtown appearance. Also, new conduit and wiring was installed for street and pedestrian lighting. *Photos courtesy of the City of Port Angeles.*



## CONCLUSION

New solutions are needed for what amounts to nearly \$1 trillion in critical drinking water and wastewater investments over the next two decades. Not meeting the investment needs of the next 20 years risks reversing public health, environmental, and economic gains of the past three decades.

Without a significantly enhanced federal role in providing assistance to drinking water infrastructure, critical investments will not occur. Possible solutions include grants, trust funds, loans and incentives for private investment. The question is not whether the federal government should take more responsibility for drinking water improvements but how it should take more responsibility.

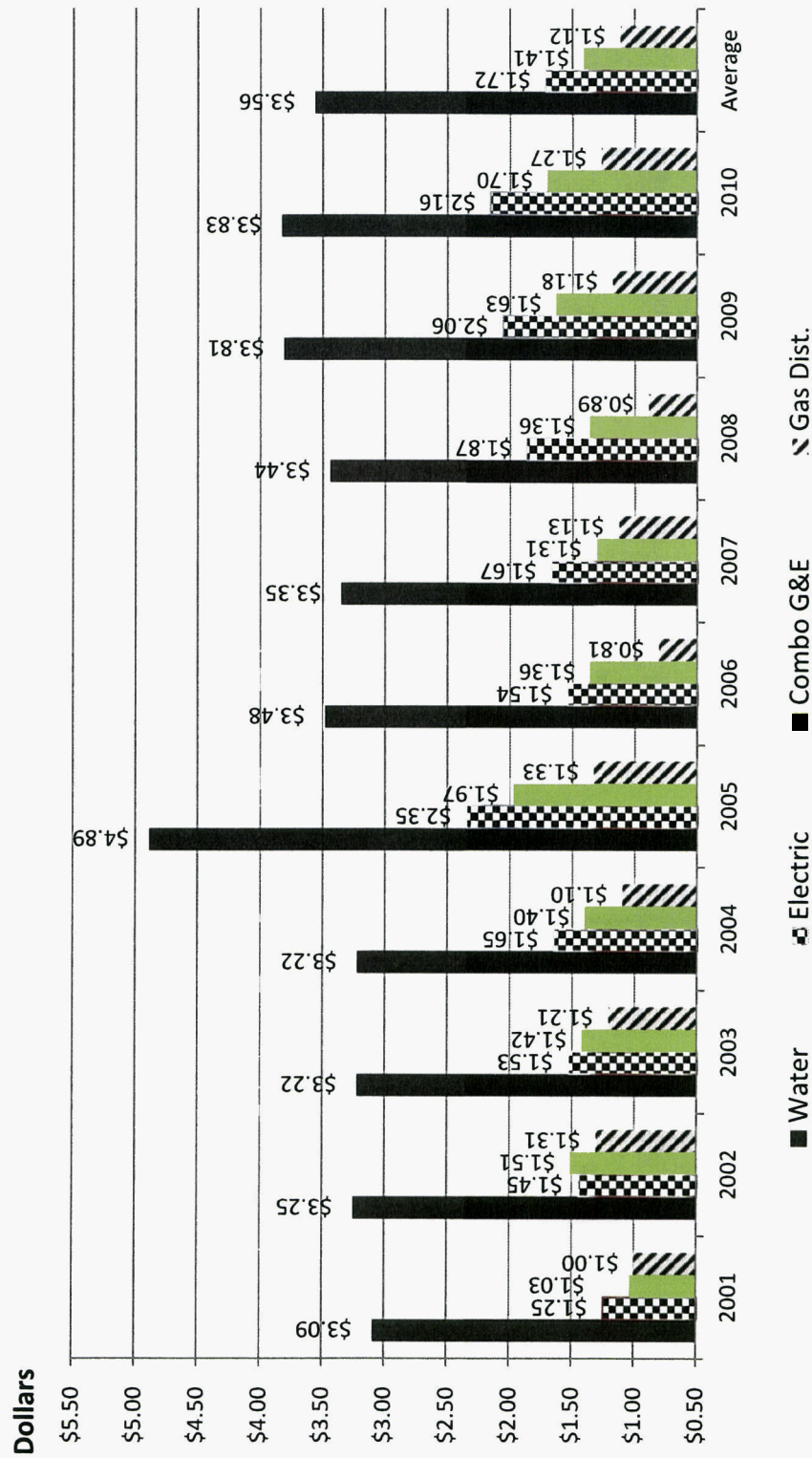
The case for federal investment is compelling. Needs are large and unprecedented; in many locations, local sources cannot be expected to meet this challenge alone, and because waters are shared across local and state boundaries, the benefits of federal help will accrue to the entire nation. Clean and safe water is no less a national priority than are national defense, an adequate system of interstate highways, and a safe and efficient aviation system. These latter infrastructure programs enjoy sustainable, long-term federal grant programs; under current policy, water and wastewater infrastructure do not. ★

## SOURCES

- 1 Congressional Research Service, *Safe Drinking Water Act: Selected Regulatory and Legislative Issues*, April 2008.
- 2 U.S. Environmental Protection Agency, *The Clean Water and Drinking Water Infrastructure Gap Analysis*, September 2002.
- 3 U.S. Congressional Budget Office, *Future Investment in Drinking Water and Wastewater Infrastructure*, May 2002.
- 4 G. Tracy Mehan, Testimony before the Subcommittee on Water Resources and Environment, U.S. House Transportation and Infrastructure Committee, February 2009. <http://transportation.house.gov/hearings/hearing.aspx>.

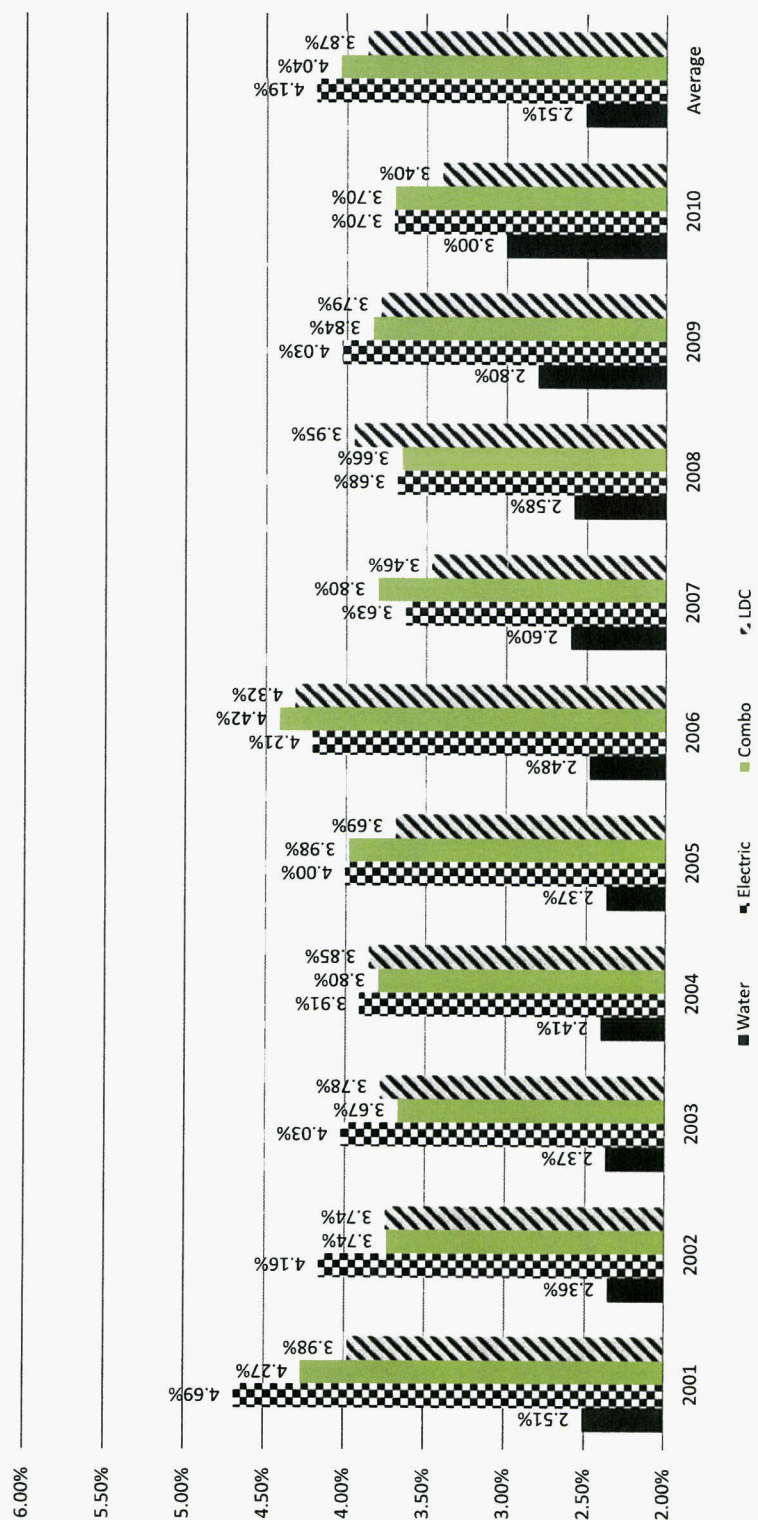
**PMA-2**

# Capital Intensity of the AUS Utility Reports Companies 2001 - 2010



Source of Information: SEC Edgar I-Metrix Online Database

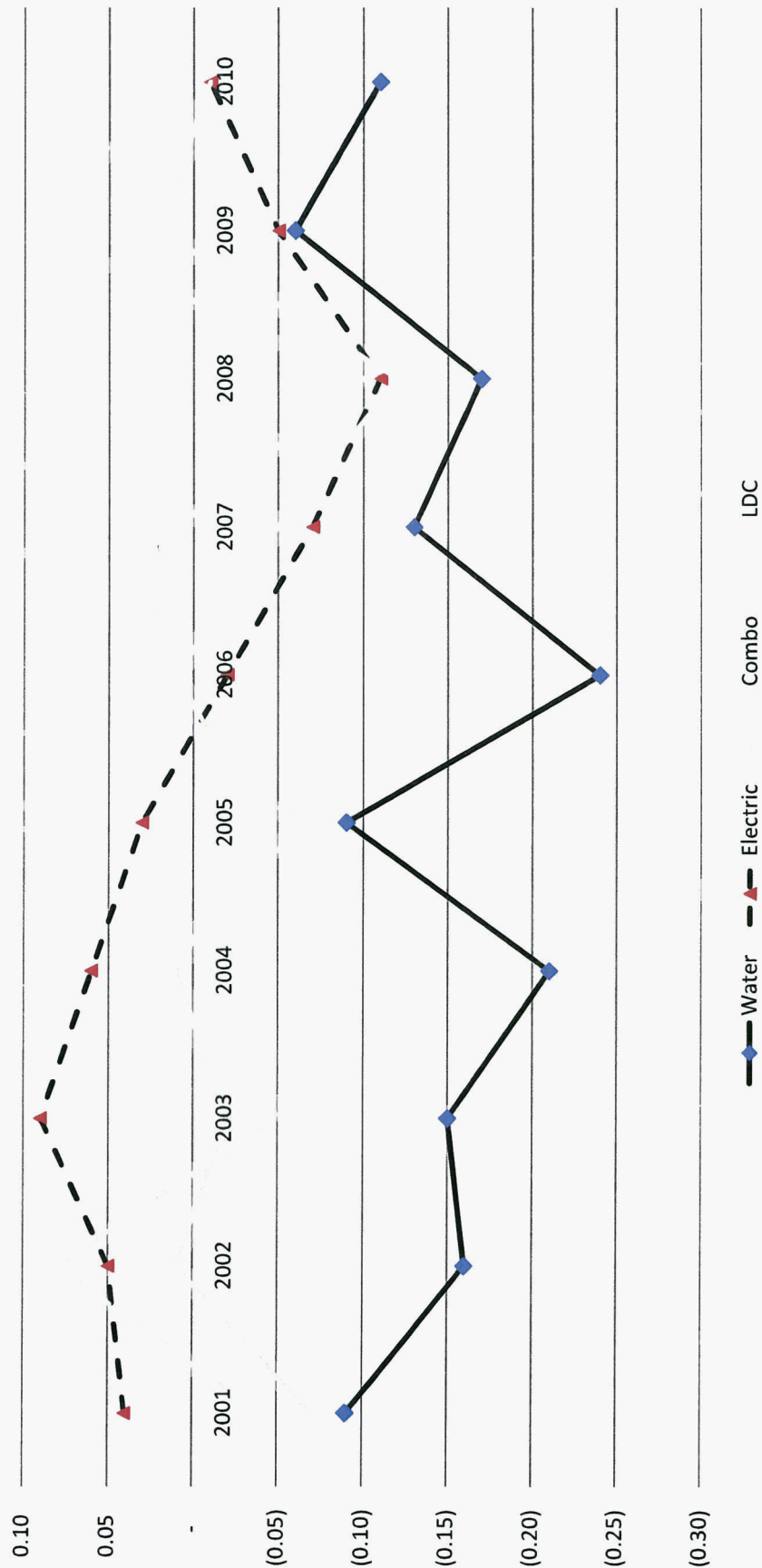
## Depreciation Rates for the AUS Utility Reports Companies 2001-2010



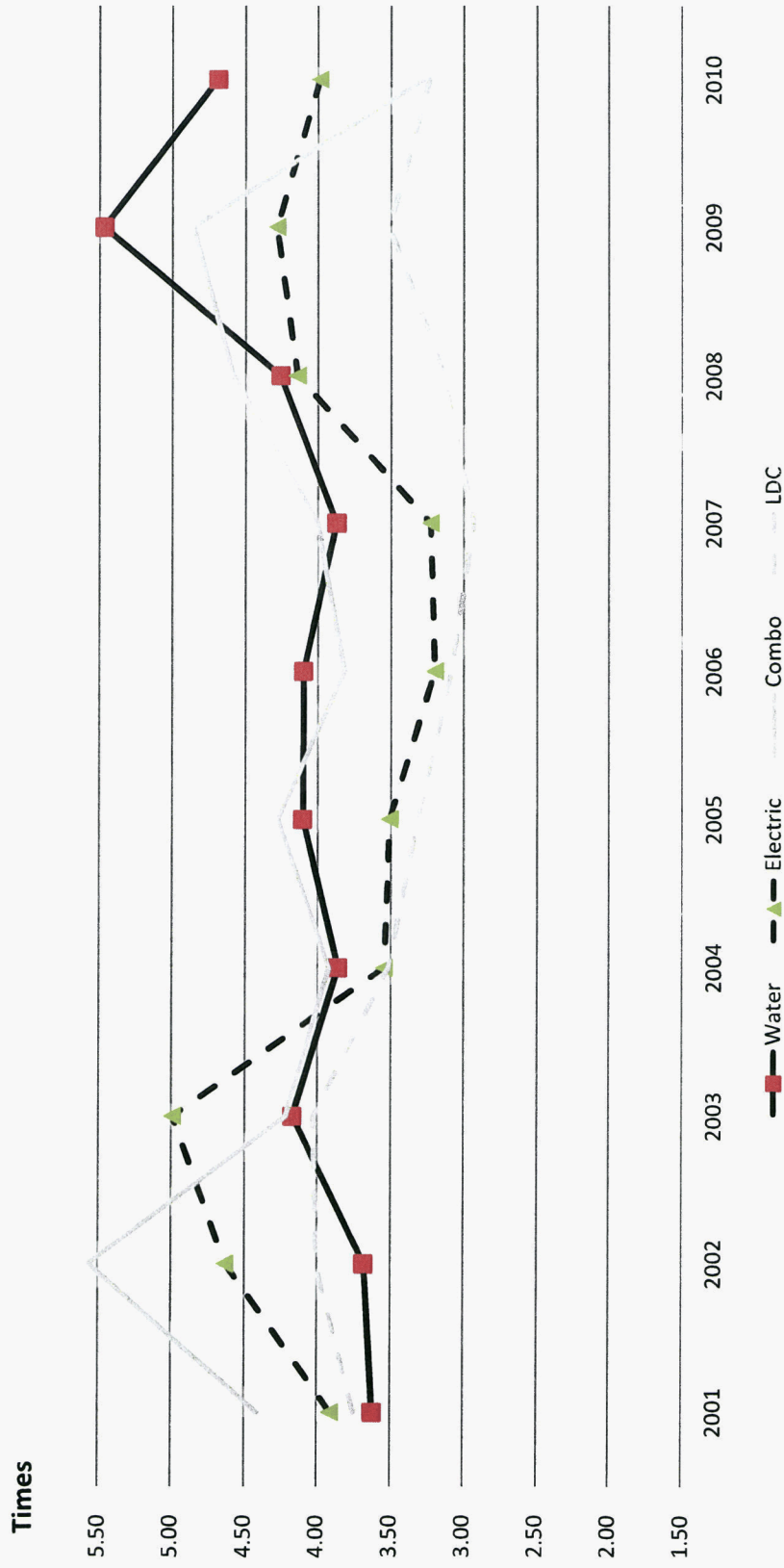
Source of Information: SEC Edgar I-Metrix Online Database



# Free Cash Flow / Operating Revenues for the AUS Utility Reports Electric Companies 2001 - 2010

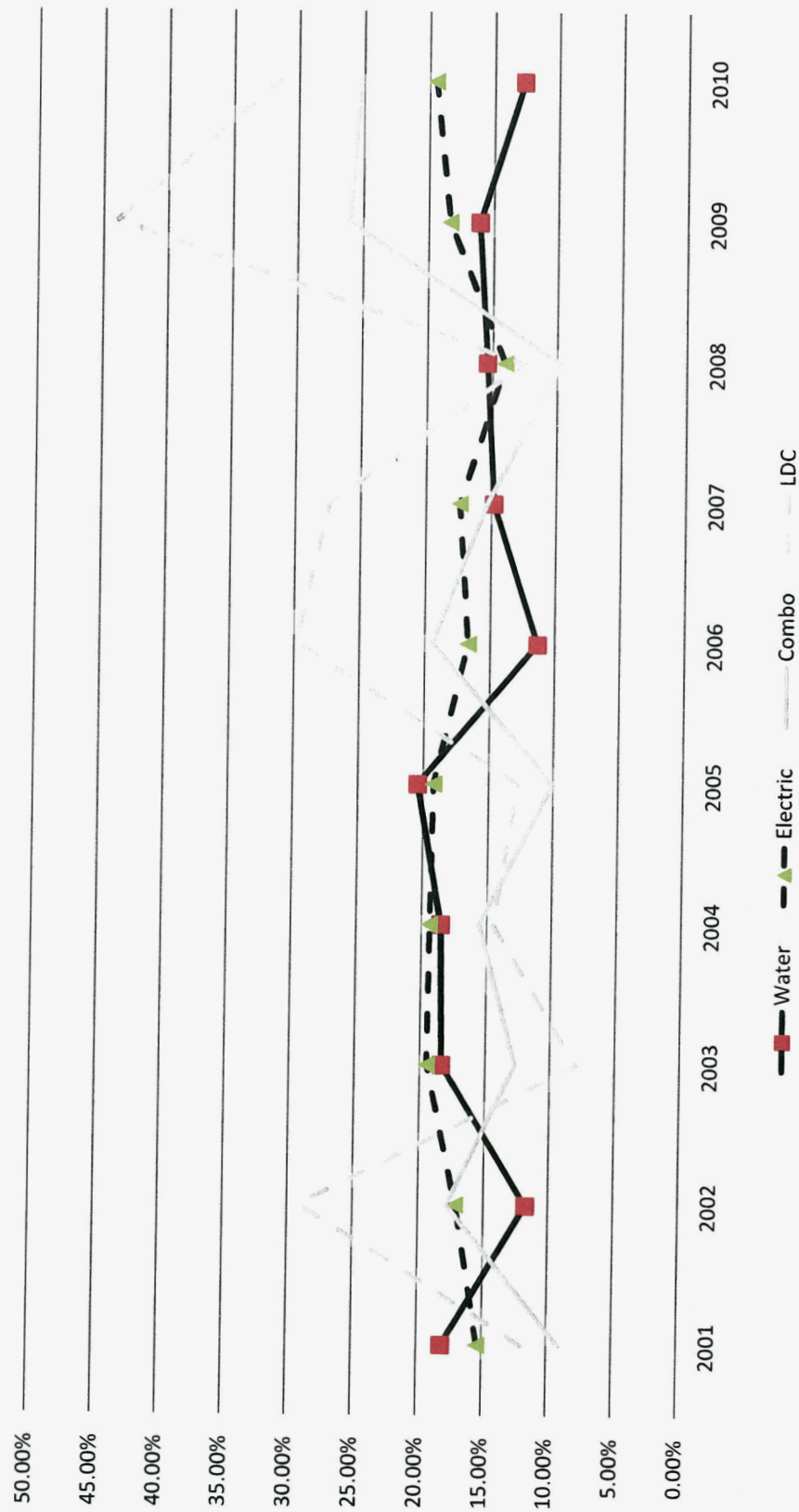


## Total Debt / EBITDA for the AUS Utility Reports Companies 2001 - 2010



Source of Information: SEC Edgar I-Metrix Online Database

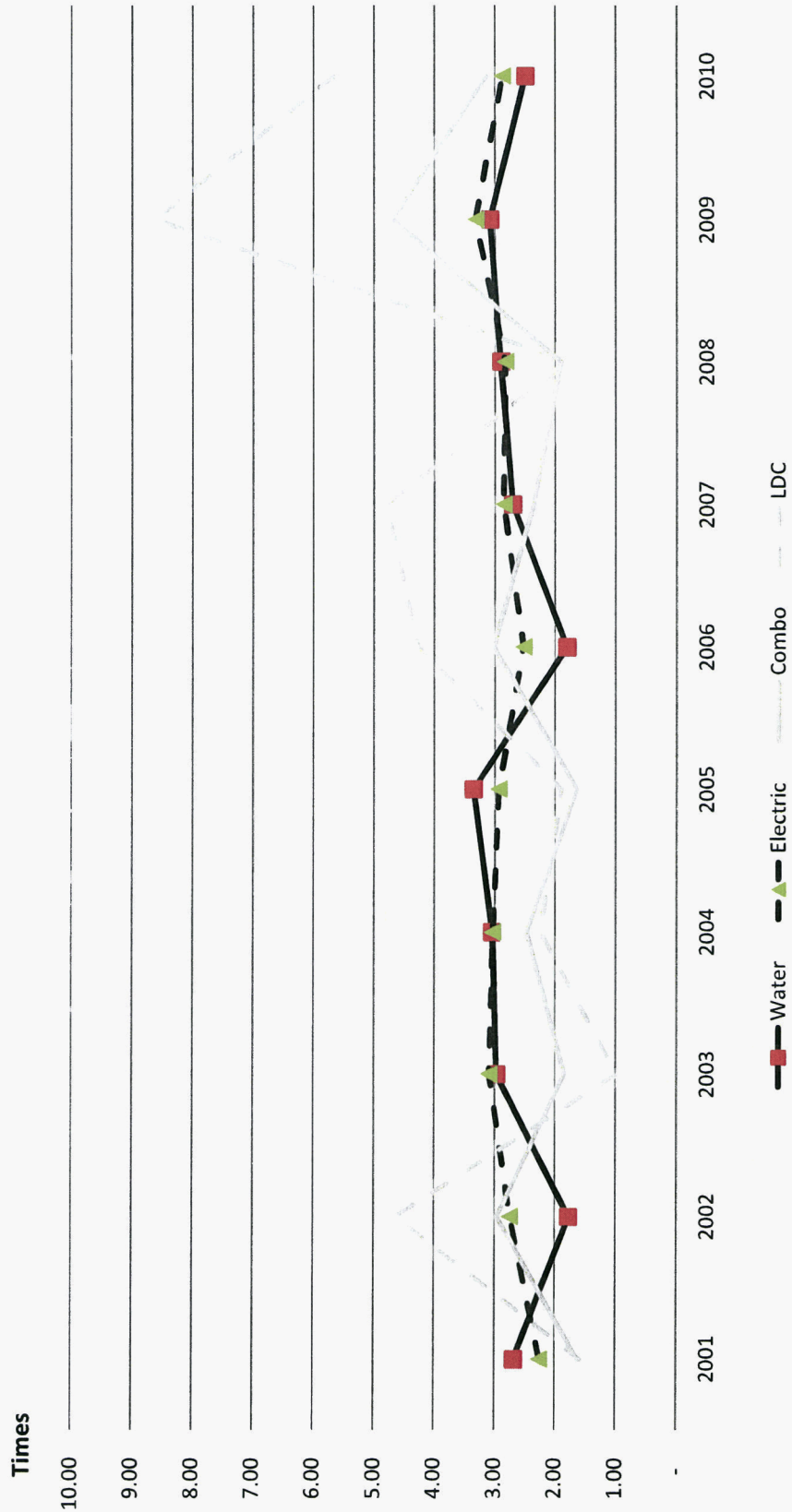
# Funds From Ops / Total Debt for the AUS Utility Reports Cos. 2001- 2010



Source of Information: SEC Edgar I-Metrix Online Database

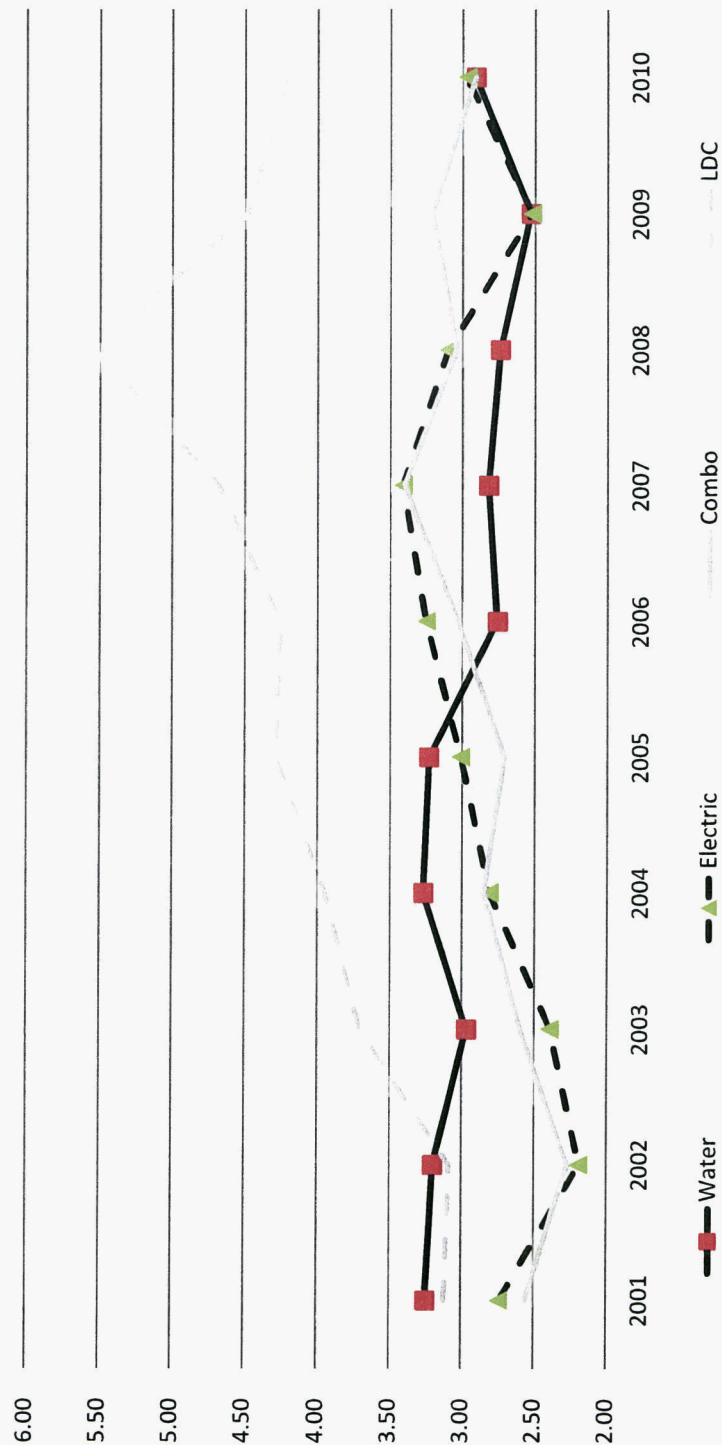


# Funds From Ops / Interest Cov. for the AUS Utility Reports Cos. 2001 - 2010



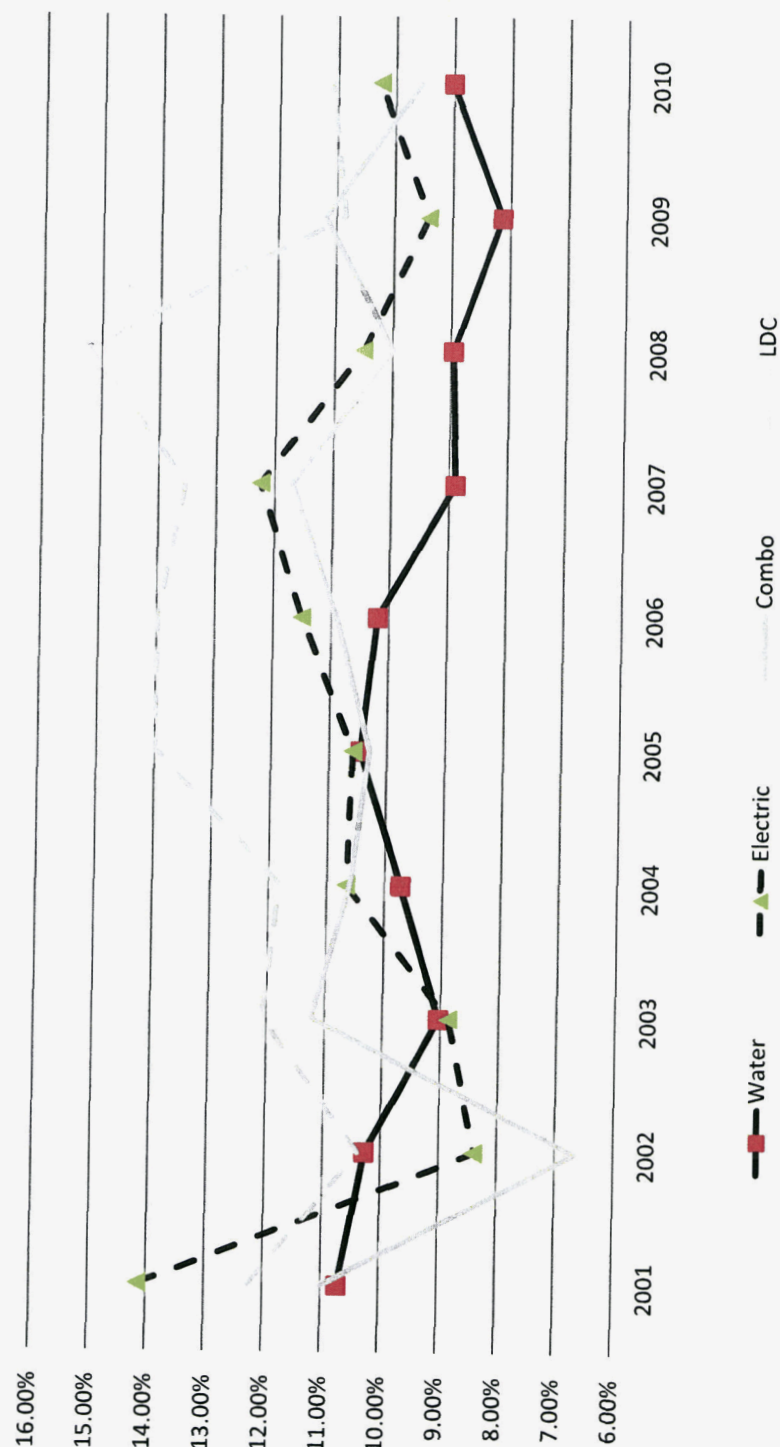
Source of Information: SEC Edgar I-Metrix Online Database

# Before-Inc. Tax / Interest Cov. for the AUS Utility Reports Cos. 2001 - 2010



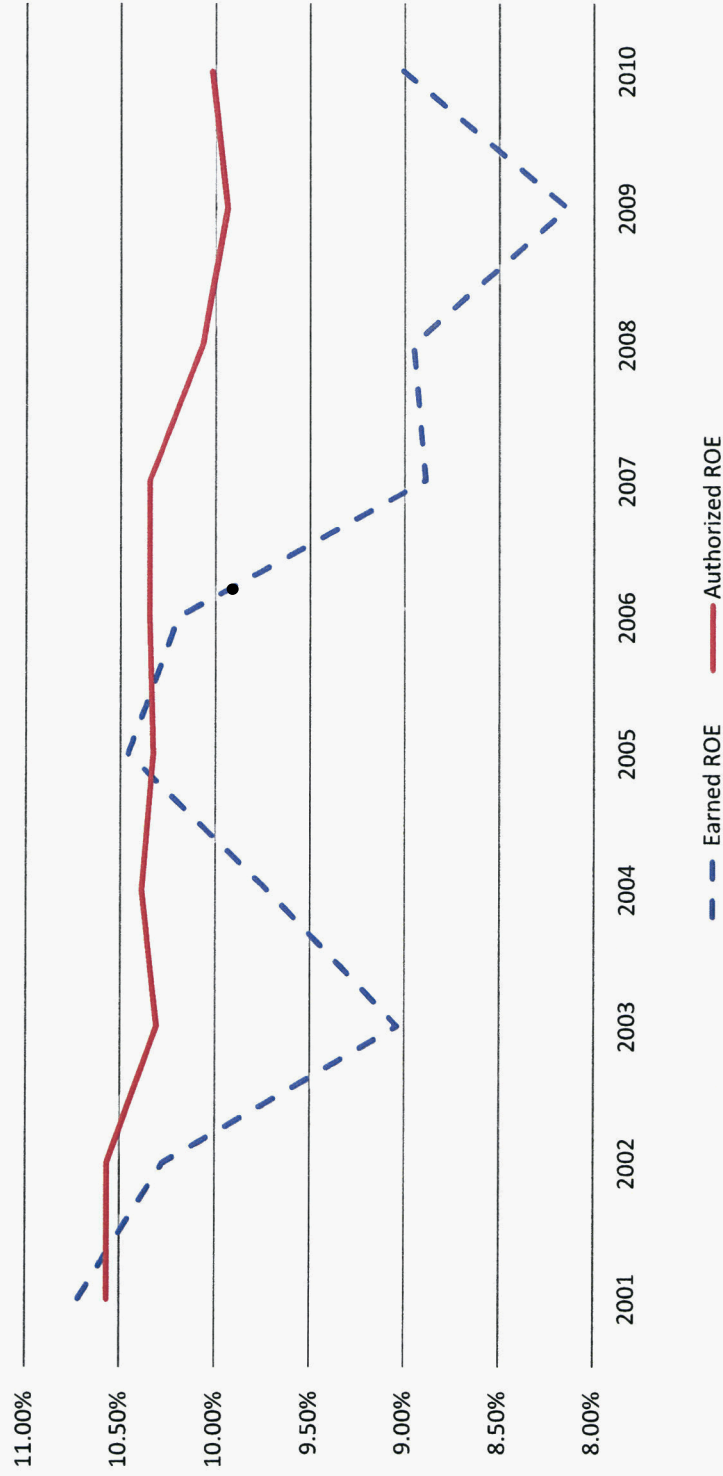
Source of Information: SEC Edgar I-Metrix Online Database

## Earned Returns on Common Equity for the AUS Utility Reports Cos. 2001 - 2010



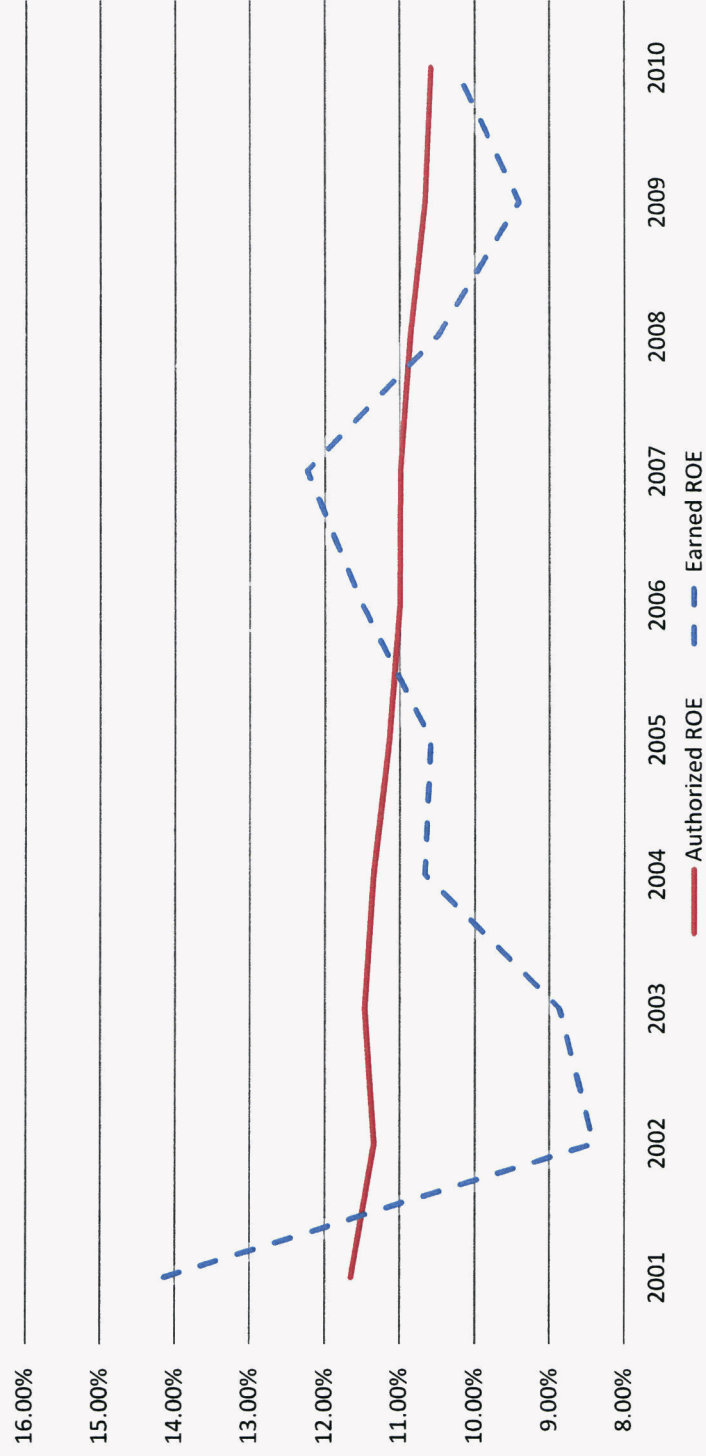
Source of Information: SEC Edgar I-Metrix Online Database

## Earned ROE v Authorized ROE for the AUS Utility Reports Water Companies 2001 - 2010



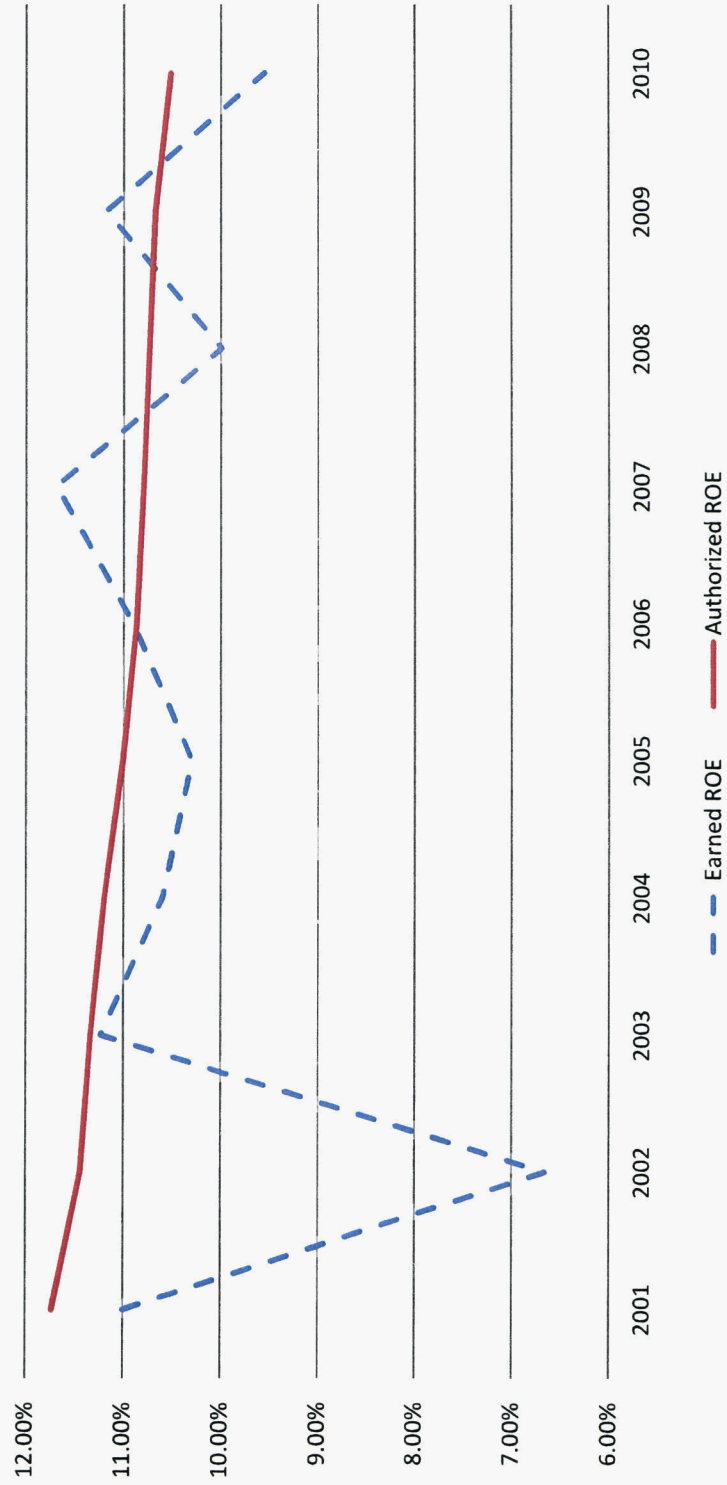
Source of Information: SEC Edgar I-Metrix Online Database & AUS Utility Reports

## Earned ROE v Authorized ROE for the AUS Utility Reports Electric Companies 2001 - 2010



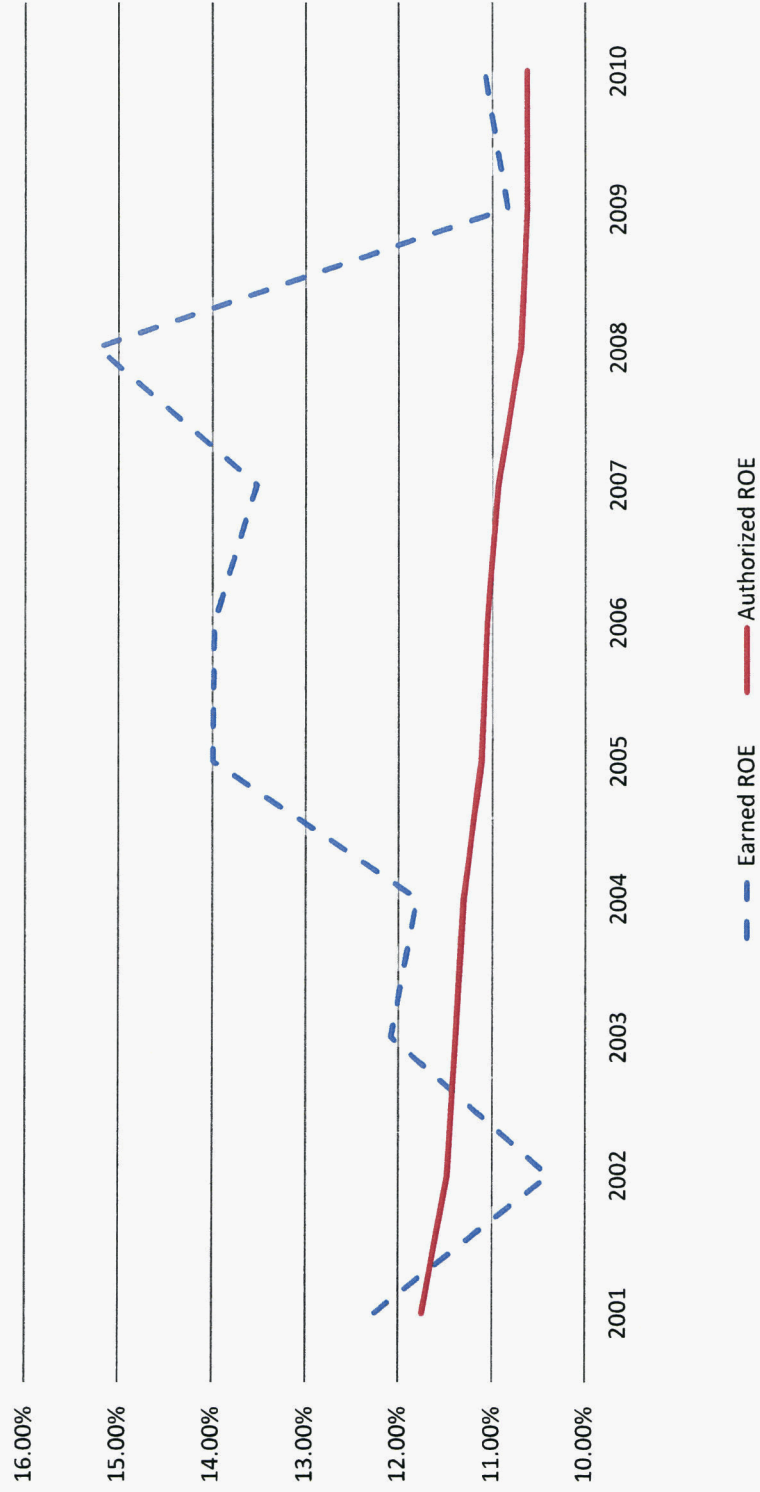
Source of Information: SEC Edgar I-Metrix Online Database & AUS Utility Reports

# **Earned ROE v Authorized ROE for the AUS Utility Reports Combination Companies 2001 - 2010**



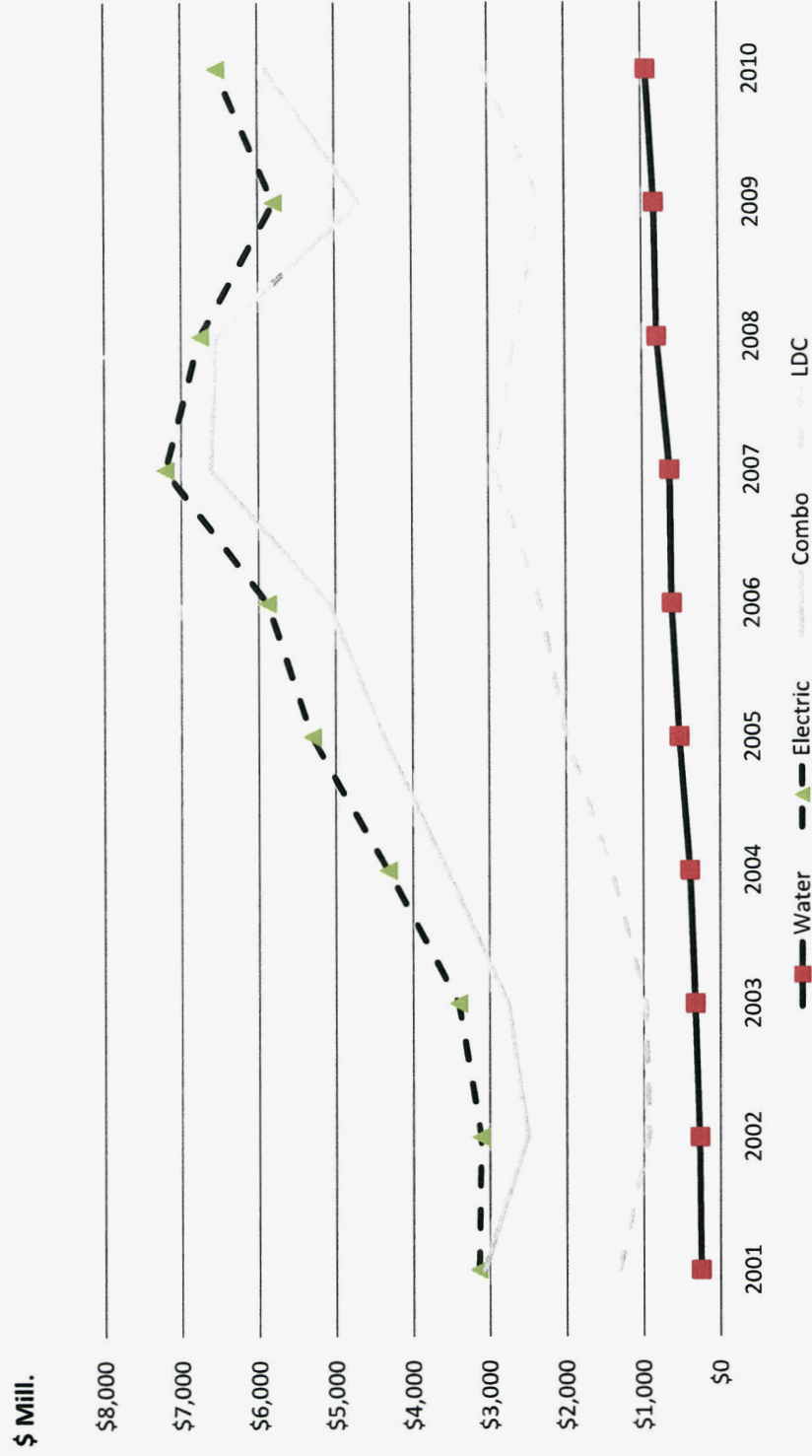
Source of Information: SEC Edgar I-Metrix Online Database & AUS Utility Reports

## Earned ROE v Authorized ROE for the AUS Utility Reports LDC Companies 2001 - 2010



Source of Information: SEC Edgar I-Metrix Online Database & AUS Utility Reports

## Market Capitalization for the AUS Utility Reports Companies 2001 - 2010



Source of Information: SEC Edgar I-Metrix Online Database



**PMA-3**

***Resolution Supporting Consideration of Regulatory Policies Deemed as “Best Practices”***

**WHEREAS,** A number of innovative regulatory policies and mechanisms have been implemented by public utility commissions throughout the United States which have contributed to the ability of the water industry to effectively meet water quality and infrastructure challenges; *and*

**WHEREAS,** The capacity of such policies and mechanism to facilitate resolution of these challenges in appropriate circumstances supports identification of such policies and mechanisms as “best practices”; *and*

**WHEREAS,** During a recent educational dialogue, the “2005 NAWC Water Policy Forum,” held among representatives from the water industry, State economic regulators, and State and federal drinking water program administrators, participants discussed (consensus was not sought nor determined) and identified over 30 innovative policies and mechanisms that have been summarized in a report of the Forum to be available on the website of the Committee on Water at [www.naruc.org](http://www.naruc.org); *and*

**WHEREAS,** As public utility commissions continue to grapple with finding solutions to meet the myriad water and wastewater industry challenges, the Committee on Water hereby acknowledges the Forum’s *Summary Report* as a starting point in a commission’s review of available and proven regulatory mechanisms whenever additional regulatory policies and mechanisms are being considered; *and*

**WHEREAS,** To meet the challenges of the water and wastewater industry which may face a combined capital investment requirement nearing one trillion dollars over a 20-year period, the following policies and mechanisms were identified to help ensure sustainable practices in promoting needed capital investment and cost-effective rates: a) the use of prospectively relevant test years; b) the distribution system improvement charge; c) construction work in progress; d) pass-through adjustments; e) staff-assisted rate cases; f) consolidation to achieve economies of scale; g) acquisition adjustment policies to promote consolidation and elimination of non-viable systems; h) a streamlined rate case process; i) mediation and settlement procedures; j) defined timeframes for rate cases; k) integrated water resource management; l) a fair return on capital investment; *and* m) improved communications with ratepayers and stakeholders; *and*

**WHEREAS,** Due to the massive capital investment required to meet current and future water quality and infrastructure requirements, adequately adjusting allowed equity returns to recognize industry risk in order to provide a fair return on invested capital was recognized as crucial; *and*

**WHEREAS,** In light of the possibility that rate increases necessary to remediate aging infrastructure to comply with increasing water quality standards could adversely affect the affordability of water service to some customers, the following were identified as best practices to address these concerns: a) rate case phase-ins; b) innovative payment arrangements; c) allowing the consolidation of rates (“Single Tariff Pricing”) of a multi-divisional water utility to spread capital costs over a larger base of customers; *and* d) targeted customer assistance programs; *and*

**WHEREAS,** Small water company viability issues continue to be a challenge for regulators, drinking water program administrators and the water industry; best practices identified by Forum participants include: a) stakeholder collaboration; b) a memoranda of understanding among relevant

State agencies and health departments; c) condemnation and receivership authority; and d) capacity development planning; *and*

**WHEREAS**, The U.S. Environmental Protection Agency's "Four-Pillar Approach" was discussed as yet another best practice essential for water and wastewater systems to sustain a robust and sustainable infrastructure to comprehensively ensure safe drinking water and clean wastewater, including: a) better management at the local or facility level; b) full-cost pricing; c) water efficiency or water conservation; *and* d) adopting the watershed approach, all of which economic regulators can help promote; *and*

**WHEREAS**, State drinking water program administrators emphasized the following mechanisms which Forum participants identified as best practices: a) active and effective security programs; b) interagency coordination to assist with new water quality regulation development and implementation, such as a memorandum of understanding; c) expanded technical assistance for small water systems; d) data system modernization to improve data reliability; e) effective administration and oversight of the Drinking Water State Revolving Fund to maximize infrastructure remediation, along with permitting investor owned water companies access in all States; f) the move from source water assessment to actual protection; *and* g) providing State drinking water programs with adequate resources to carry out their mandates; *now therefore be it*

**RESOLVED**, That the National Association of Regulatory Utility Commissioners (NARUC), convened in its July 2005 Summer Meetings in Austin, Texas, conceptually supports review and consideration of the innovative regulatory policies and practices identified herein as "best practices;" *and be it further*

**RESOLVED**, That NARUC recommends that economic regulators consider and adopt as many as appropriate of the regulatory mechanisms identified herein as best practices; *and be it further*

**RESOLVED**, That the Committee on Water stands ready to assist economic regulators with implementation of any of the best practices set forth within this Resolution.

---

*Sponsored by the Committee on Water*  
*Adopted by the NARUC Board of Directors July 27, 2005*

**PMA-4**

RESOURCES FOR:

[Public Officials](#) [The Media](#) [Regulators](#) [Concerned Citizens](#)

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State Utility Regulation

State Regulatory Programs

Regulatory Practices

**Distribution System Investment Charge (DSIC)**

**Prospectively Relevant Test Year**

**Acquisition Adjustments**

**Construction Work In Progress (CWIP)**

**Decoupling**

**Pass-Through Adjustments**

**Rate Consolidation**

**Mediation & Settlement Procedures**

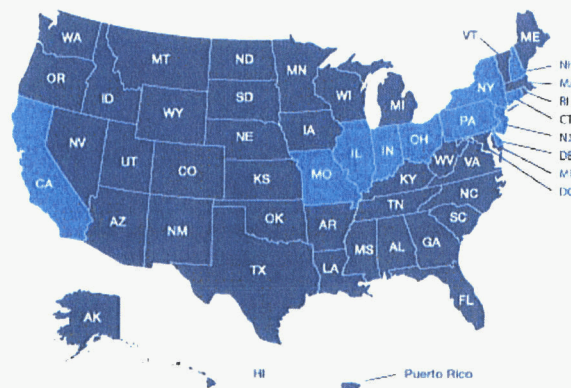
**Defined Timeframes for Rate Cases**



## Distribution System Investment Charge (DSIC) for Water and Wastewater Systems

DSIC was first implemented in Pennsylvania in approximately 1996 and allows for rate increases, outside of a general rate proceeding, for non-revenue producing investments to replace aging infrastructure. In Pennsylvania, the program has operated for almost 10 years with no known customer complaints. Benefits of the program include more efficient and timely investment of capital, significant progress in replacing aging infrastructure, enhanced service quality, reduction of water lost through leaks, avoidance of rate shock, and others. As water supplies become more stressed in the future due to many factors, reducing water lost through aging infrastructure will become more important. Such programs typically include protections for customers such as limits on the amount of incremental revenues that can be collected, exclusion of capital projects that are revenue producing, and true-up mechanisms.

### States with DSIC



#### California

Infrastructure Investment Surcharge Mechanism (IISM) — pilot basis for California American Water's Los Angeles District

#### Connecticut

Water Infrastructure and Conservation Adjustment (WICA)

#### Delaware

Distribution System Improvement Charge (DSIC)

#### Illinois

Qualifying Infrastructure Plant Surcharge (QIPS)

#### Indiana

Distribution System Improvement Charge (DSIC)

#### Missouri

System Infrastructure Charge (SIC)

#### New Hampshire

Water Infrastructure and Conservation Adjustment (WICA) — pilot basis for Aquarion Water

#### New Jersey

Distribution System Improvement Charge (DSIC)

#### New York

Distribution System Improvement Charge (DSIC)

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System Infrastructure Charge (SIC)

**Pennsylvania**  
Distribution System Improvement Charge (DSIC)

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Sustainability

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Public-Private Partnerships

Water Reuse

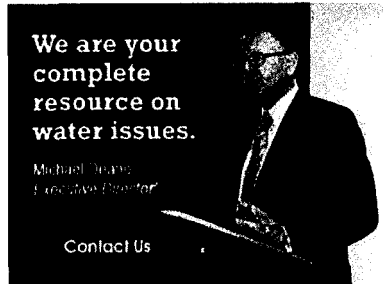
Design/Build /Operate

Customer Service

Conservation & Sustainability

Water Operating Services

Biosolids



Twitter



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**PMA-5**

## Rating Methodology

### Table of Contents:

Summary	1
About the Rated Universe	2
About this Rating Methodology	5
Rating Factor #1: Regulatory Environment & Asset Ownership Model	8
Rating Factor #2: Operational Characteristics & Asset Risk	14
Rating Factor #3: Stability of Business Model and Financial Structure	17
Rating Factor #4: Key Credit Metrics	19
Structural Considerations and Sources of Rating Uplift from Creditor Protection	23
Rating Methodology Assumptions and Limitations, and other Rating Considerations	24
Regional Differences	25
Conclusion: Summary of the Grid- Indicated Rating Outcomes	27
Appendix I – Regulated Water Utilities Rating Grid	28
Appendix II – Indicated Ratings and Results of Mapping	32
Appendix III - Industry Overview	38
Appendix IV – Rating Issues Over the Next Decade	41
Moody's Related Research	43

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## Moody's Global Infrastructure Finance

December 2009

## Global Regulated Water Utilities

### Summary

This Rating Methodology explains Moody's approach to rating privately financed<sup>1</sup> regulated water utilities and provides guidance as to how the different analytical factors are combined.

Privately financed regulated water utilities are still relatively rare in the overall global water utility universe. Given the importance of water supply and the health risks related to its service provision, the sector maintains strong links to national, regional or local governments. Full privatisation of the entire value chain of water and wastewater services remains rare, with the UK being the main exception.

There are a variety of business models, with varying degrees of private sector involvement. In the rated universe, companies have also adopted a range of funding options. The most innovative financing structures have been developed in the UK, where a number of water companies have overlaid structural enhancements on typical long-dated capital market funding, incorporating features seen in other infrastructure sectors.

In this Rating Methodology, we discuss the four key rating factors that constitute Moody's analytical framework for rating regulated water utilities and additional considerations.

The key factors are:

- Regulatory Environment & Asset Ownership Model
- Operational Characteristics & Asset Risk
- Stability of Business Model & Financial Structure
- Key Credit Metrics

<sup>1</sup> This methodology does not apply to water utilities financed under the US public finance model or to privately financed, public infrastructure projects ("PFI" or "PPP"), for which Moody's has published separate Rating Methodologies: "Analytical Framework for Water and Sewer System Ratings", published in August 1999; "Operating Risk in Privately-Financed Public Infrastructure (PFI/PPP/P3) Projects", published in December 2007; and "Update: Privately-Financed Public Infrastructure (PFI/PPP/P3) Projects with Partial Market Revenue Risk", published in November 2008.



**Moody's Investors Service**



## Global Regulated Water Utilities

Each of these rating factors encompasses a number of sub-factors, which we discuss in detail in this report. We also provide a rating grid that maps each of the factors, sub-factors and financial metrics, to broad letter-rating categories.

The purpose of this methodology and grid is to provide a tool to gauge approximate credit profiles within the regulated water sector. While the factors and sub-factors within the grid are designed to capture the fundamental rating drivers for the sector, this grid does not include every rating consideration and will not fit every business model perfectly. Furthermore, most of the sub-factor mappings use historical financial results while ratings also consider forecast results. As such, the grid-indicated rating is not expected to always match the actual rating of each company; our objective is for users of this methodology to be able to estimate a company's rating (senior unsecured ratings for investment-grade issuers and corporate family ratings for speculative-grade issuers) within two alpha-numeric notches.

Furthermore, certain more generic factors (including corporate governance, management strength, financial disclosure and liquidity arrangements) remain important inputs into our ratings. Importantly, given continued government involvement and ownership in many regulated water utilities, we also apply our rating methodology for Government-Related Issuers ("GRIs"), as appropriate, to the water sector.<sup>2</sup> However, all these considerations apply to all rated corporate sectors; as a result, we have chosen not to cover these issues in depth within this Rating Methodology.

This publication includes the following sections:

- **About the Rated Universe:** An overview of the rated regulated water utilities.
- **About this Rating Methodology:** A description of our rating methodology, including a detailed explanation of each of the key rating factors.
- **Structural Considerations and Sources of Rating Uplift from Creditor Protection:** A discussion of potential additional rating uplift through credit-enhancing features and covenants in a company's financing structure.
- **Assumptions & Limitations:** A comment on the rating methodology's assumptions and limitations, including a discussion of other rating considerations that are not included in the grid.

Appendix I of this report provides a summary of the rating grid and key rating factors.

In the appendices, we also provide tables that illustrate the application of the methodology grid to 23 of the 26 publicly rated regulated water utilities with explanatory comments on some of the more significant differences between the grid-implied rating and our actual rating (Appendix II), a brief industry overview (Appendix III), and a discussion of key rating issues for the regulated water sector over the medium term (Appendix IV).

## About the Rated Universe

For the purposes of this methodology, we define regulated water utilities as issuers whose principal line of business is the provision of water and/or wastewater<sup>3</sup> services along the entire value chain of the process (as explained in Appendix III). Services may be provided under contract or concession agreements or direct licensing arrangements with the relevant governmental authority, and the assets may be owned outright by the issuer or operated under the terms of a concession or licence. For clarification, the methodology intends to capture only water companies that are responsible for funding the water and/or wastewater infrastructure assets indefinitely or for the duration of the concession or operational contract. It does not capture pure service operators. Issuers that are owned by a government authority are captured by this methodology if they can be considered separate legal entities and not an integral part of the government administration.

<sup>2</sup> See Moody's Rating Methodology: "The Application of Joint Default Analysis to Government Related Issuers", April 2005; Special Comment: "The Incorporation of Joint-Default Analysis into Moody's Corporate, Financial and Government Rating Methodologies", February 2005; and Special Comment: "Rating Government-Related Issuers in European Corporate Finance", June 2005.

<sup>3</sup> Depending on the jurisdiction or the industry set-up, different terminology for the wastewater services may be used, including (but not limited to) sewerage or sanitation services. For simplicity we will refer to wastewater services throughout this report.

## Rating Methodology

## Moody's Global Infrastructure Finance

## Global Regulated Water Utilities

This methodology encompasses different types of financing for water utilities, e.g. general corporate funding structures as well as more highly leveraged financing structures with credit enhancing features. However, privately financed, public infrastructure projects are not subject to this rating methodology, but would fall under Moody's rating methodology for PPP and PFI transactions. For further discussion of the rating implications of financing sources, please refer to "Structural Considerations and Sources of Rating Uplift from Creditor Protection" below.

This methodology does not capture larger multi-utilities, whose activities may include the provision of regulated, monopoly-based water and wastewater services, but do not represent the vast majority of overall group activities. The credit quality of the relevant business segment, however, can be scored under this methodology. For example, Sociedad General de Aguas de Barcelona, S.A. (AGBAR) and United Waterworks, Inc are both covered by the methodology whilst the parent company, Suez Environnement, is not.

Moody's currently rates 26 water utilities (including five holding companies) that we regard as separate legal corporate entities, i.e. detached from the relevant government administration. These issuers currently account for around US\$44 billion of total debt instruments rated. Figure 1 provides a list of all rated regulated water utilities, showing their locations, ratings and amount of rated debt.

Figure 1

## Rated Regulated Water Utilities

Issuer	Country		Global Rating	Outlook	Amount of Rated Debt in US\$ millions
Europe					
Acquedotto Pugliese S.p.A.	Italy	GRI	Baa3 [12]	Negative	268
Bratislavská vodarenska spolocnost, a.s.	Slovakia	GRI	Baa2 [11]	Stable	0
Sociedad General de Aguas de Barcelona, S.A. (AGBAR)	Spain		A2	UR-D	0
Anglian Water Services Limited	UK	CFR	Baa1	Stable	7,132
Dwr Cymru Cyfyngedig	UK	CFR	A3	Stable	2,603
Northumbrian Water Limited	UK		Baa1	Stable	1,071
Severn Trent Water Limited	UK		A3	Stable	4,458
Severn Trent Plc	UK		Baa1	Stable	*** 4,598
South East Water Limited	UK		Baa2	Stable	594
South Staffordshire Water Plc	UK		Baa2	Stable	57
Southern Water Services Limited	UK	CFR	Baa1	Stable	4,196
Sutton & East Surrey Water Plc	UK		Baa1	Stable	162
Thames Water Utilities Limited	UK	CFR	Baa1	Stable	7,770
Veolia Water Central Limited (formerly Three Valleys Water Plc)	UK		A3	Negative	325
United Utilities Water Plc	UK		A3	Stable	5,664
United Utilities Plc	UK		Baa1	Stable	*** 6,695
Wessex Water Services Limited	UK		A3	Stable	1,704
Yorkshire Water Services Limited	UK	CFR	Baa1	Stable	3,883
North America					
American Water Works Company, Inc.	US		Baa2	Stable	*** 2,215
New Jersey American Water Company, Inc.	US		Baa1	Stable	200
Pennsylvania American Water Company	US		Baa1	Stable	412
Golden State Water Company	US		A2	Stable	125
Pennichuck Water Works, Inc.	US		Baa3	Stable	50
United Waterworks, Inc.	US		Baa1	Negative	88
Latin America					
Companhia de Saneamento do Parana - SANEPAR	Brazil	GRI	Ba3 [13]	Negative	94

## Global Regulated Water Utilities

## Rated Regulated Water Utilities

Entity	Country	Current Rating	Outlook	Amount of Rated Debt in US\$ millions	
Asia					
Korea Water Resources Corp.	Korea	GRI	A2	Stable	300
Total Rated Debt					43,930

Note: \* senior unsecured issuer or corporate family rating; number in brackets reflects BCA, where applicable

\*\* as at 15 December 2009

\*\*\* rated consolidated group debt

We note that the ratings for the five holding companies, namely AGBAR, Severn Trent Plc, United Utilities Plc, American Water Works Company, Inc. and United Waterworks, Inc., may reflect notching for structural subordination and their actual ratings therefore do not necessarily match the grid-indicated outcomes, which relate to the consolidated credit quality of their groups, before taking into account any structural subordination. For this reason, two of these holding companies, Severn Trent Plc and United Utilities Plc, are excluded from the detailed mapping of the factors in Appendix II, and only the relevant operating entity is captured.

Four of the rated water utilities are considered GRIs, as they remain wholly or partly owned by national or regional governments. Therefore, their ratings reflect the application of Moody's joint default analysis under our rating methodology for GRIs. In these cases, the methodology presented in this report serves to assess the baseline credit risk of the issuer, over which our assessments of government support and default dependence are subsequently layered in accordance with our GRI methodology. We exclude Korea Water Resources Corp. from the tables in Appendix II, which provides the detailed scoring of the water companies under this rating methodology, given that – despite the relevance of the general factors addressed within this rating methodology – the company's final rating is driven primarily by its strong linkage to the A2-rated Korean government.

As shown above, the majority of rated issuers are located in Europe, principally in the UK, which accounts for around 93% of the rated debt in the universe of rated regulated water utilities. The UK (more specifically England and Wales) remains the only market in Europe where the entire value chain of water and wastewater services has been fully privatised. This fact combined with the substantial scale of operators and a well-established and transparent regulatory framework for the UK water sector resulted in significant investor interest in the sector. It also somewhat explains the high use of capital market funding compared to other regions.<sup>4</sup>

Given the prominence of the UK water sector in the debt capital markets, we have provided and will continue to provide extensive detailed research for this geographical market. Such specific regional research will remain relevant for the analysis of key rating drivers as part of the assessment of the relevant issuers' credit quality.

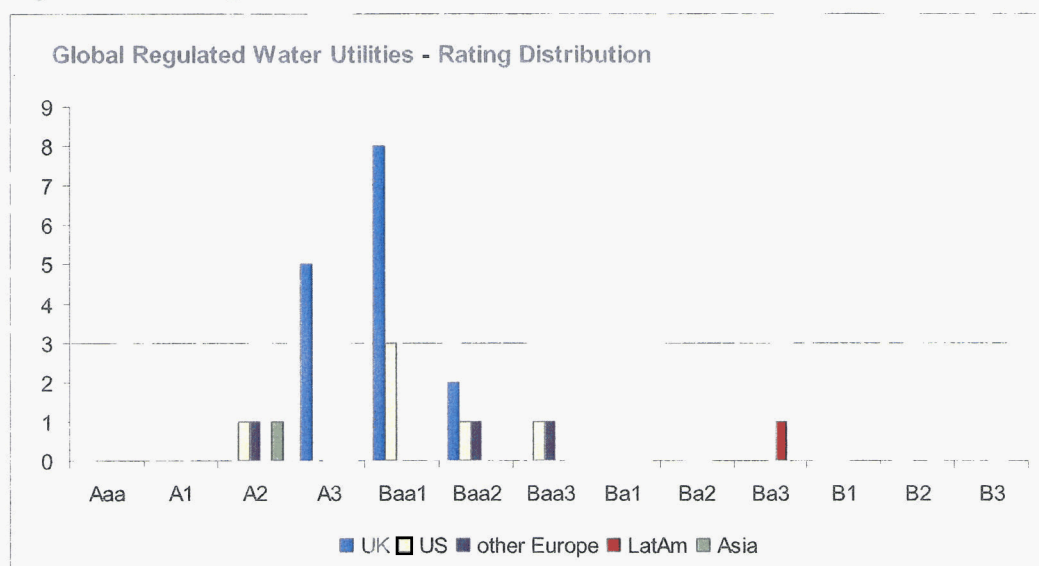
Within the rated universe AGBAR is the only regulated water utility that not only operates assets held under licence or long-term concessions, but is also active as an operational service provider. AGBAR's vast portfolio of concession activities includes asset ownership arrangements in relation to the water and wastewater services provided to Barcelona, its most important service area, as well as AGBAR's international operations in the UK and Chile, which altogether account for around 75% of the group's EBITDA (generated in the water segment).

Figure 2 summarises the rating distribution in the sector:

<sup>4</sup> We note that the above summary excludes around US\$1.5 billion of debt in relation to the UK water sector, which has been issued by monoline-guaranteed funding vehicles.

## Global Regulated Water Utilities

Figure 2 – Rating Distribution



The rating distribution is largely driven by the UK water sector. Based on the senior unsecured issuer and corporate family ratings assigned and included in the graphic distribution shown above, the average sector rating globally is Baa1. However, the average debt rating is A3.<sup>5</sup>

## About this Rating Methodology

Moody's rating methodology for regulated water utilities incorporates the following steps.

### IDENTIFYING KEY RATING FACTORS

This rating methodology focuses on four broad rating factors:

- I) Regulatory Environment & Asset Ownership Model
- II) Operational Characteristics & Asset Risk
- III) Stability of Business Model & Financial Structure
- IV) Key Credit Metrics

The first two factors relate to the fundamental business characteristics of a water utility. The third factor aims to capture the dimension of credit risk associated with potential changes to an issuer's business or capital structure, which may result from its strategy on corporate activity, diversification and/or financial policies. The fourth rating factor comprises four key financial metrics that we most commonly employ when examining regulated water utilities.

Finally, we consider whether the final rating should be adjusted to incorporate uplift from structural enhancements that may be incorporated in the company's financial arrangements. The effectiveness of any such enhancements is graded to determine the appropriate uplift as described in the section "Structural Considerations and Sources of Rating Uplift from Creditor Protection" below.

<sup>5</sup> A corporate family rating is an opinion of a corporate family's ability to honour all of its financial obligations and is assigned to a corporate family as if it had a single class of debt and a single consolidated legal entity structure. A corporate family rating does not reference an obligation or class of debt and thus does not reflect priority of claim. It applies to all affiliates under the management control of the entity to which it is assigned. We note that the majority of rated highly leveraged financing transactions that have been executed in the UK achieve a corporate family rating of Baa1, which incorporates the benefit from a number of structural credit enhancements. Under these funding structures issuers typically issue two classes of debt with differing levels of seniority and priority of claim. The majority of rated debt is issued within the more senior tranche of debt, which benefits from additional credit-enhancement. Therefore, the majority of rated debt within the UK is at the A3 rating level rather than the Baa1 level.

## Global Regulated Water Utilities

**MAPPING FACTORS TO THE RATING CATEGORIES**

The four broad rating factors are broken down into 13 sub-factors (9 sub-factors underlying the first three factors plus four credit metrics). Under the methodology, an issuer's characteristics are scored for each sub-factor according to qualitative and quantitative measures defined for each broad rating category (i.e. Aaa, Aa, A, Baa, Ba, B and Caa).

With respect to the first three key factors, we have determined what we consider appropriate ranges for each broad rating category. The methodology aims to capture the characteristics of all potential corporate issuers, and thus also ranks theoretical features not actually yet encountered within the rated universe. Features that we associate with a very low degree of credit risk are classified in the Aaa or Aa categories, whilst characteristics that we believe imply a very high degree of credit risk and could cause an issuer to default are classified in the single-B or Caa categories.

The ranges of credit metrics that represent the fourth key factor have been mapped to broad rating categories for an issuer that presents moderate investment-grade characteristics in all other key factors (i.e. principally in the A-Baa range). Thus, utilities with stronger business risk characteristics than those commensurate with a rating in the A or Baa range can sustain lower credit metrics and still achieve a solid investment-grade rating.

Recognising the stability and predictability of a water utility's cash flow generation, thresholds of credit metrics required for each broad rating category are less demanding than for many corporate issuers in other industries. They are, however, similar to ratio thresholds used in rating methodologies for other infrastructure issuers, which show a similarly low risk profile, e.g. regulated electric and gas networks, operational toll roads or airports.

**WEIGHTING FACTORS AND RATING SCORES**

The following table shows the weightings applied to each key factor.

Key Factor	Weighting
Regulatory Environment & Asset Ownership Model	40%
Operational Characteristics & Asset Risk	10%
Stability of Business Model & Financial Structure	10%
Key Credit Metrics	40%

As credit metrics are already adjusted to reflect a generally high degree of debt capacity of a regulated water utility, they are assigned a relatively high weighting, accounting for 40% of the final score. However, this is balanced by an equivalent 40% weighting of the first factor, Regulatory Environment & Asset Ownership Model. This factor recognises the fundamental characteristics of the regulatory regime and its cost recovery provisions as well as the business model applied by the relevant utility, considering the different risk proposition of asset ownership and management contracts. These aspects are of paramount importance in determining the utility's overall business risk and thus debt capacity.

As shown below, within each key factor, individual sub-factors have received an individual weighting depending on their deemed importance for the assessment of a water utility's credit quality.

## Rating Methodology

## Moody's Global Infrastructure Finance

## Global Regulated Water Utilities

Factor	Weighting
<b>1. Regulatory Environment &amp; Asset Ownership Model</b>	<b>40%</b>
1. a) Stability & Predictability of Regulatory Environment	15%
1. b) Asset Ownership Model	10%
1. c) Cost and Investment Recovery (Ability & Timeliness)	12%
1. d) Revenue Risk	3%
<b>2. Operational Characteristics &amp; Asset Risk</b>	<b>10%</b>
2. a) Operational Efficiency	5%
2. b) Scale & Complexity of Capital Programme & Asset Condition Risk	5%
<b>3. Stability of Business Model &amp; Financial Structure</b>	<b>10%</b>
3. a) Ability & Willingness to Pursue Opportunistic Corporate Activity	3.33%
3. b) Ability & Willingness to Increase Leverage	3.33%
3. c) Targeted Proportion of Revenues Outside Core Water and Wastewater Activities	3.33%
<b>4. Key Credit Metrics</b>	<b>40%</b>
4. a) Adjusted Interest Coverage OR FFO Interest Coverage	15%
4. b) Net Debt to Regulated Asset Base OR Debt/Capitalisation	15%
4. c) FFO / Net Debt	5%
4. d) RCF / Capex	5%

A further weighting is applied by rating category as shown in the table below.

Rating Category	Aaa	Aa	A	Baa	Ba	B	Caa
Weighting	1	1	1	1.15	2	3	5

We weight lower rating scores more heavily than higher scores for two reasons. In the first instance, we need to adjust for those situations where an issuer exhibits weak characteristics across the first three factors, which are not typically encountered within the rated universe and which would require more demanding thresholds for the credit metrics. Secondly, we recognise that a serious weakness in one area often cannot be completely offset by a strength in another area and that the lack of flexibility normally associated with high degrees of leverage can heighten risk.

**DETERMINING THE FINAL RATING**

The steps outlined above produce a final distribution of scores by rating category. The percentage score in each category is then multiplied by a value from 1 for Aaa to 18 for Caa to map to a final rating (before adjustment for creditor protection), as shown in the following table.

Rating Category	Aaa	Aa	A	Baa	Ba	B	Caa
Value	1	3	6	9	12	15	18

This weighted average score is mapped to the table below, and an overall alpha-numeric rating is assigned based on where the score falls in the range.

## Rating Methodology

## Moody's Global Infrastructure Finance

## Global Regulated Water Utilities

Initial Rating	Overall Score
Aaa	< 1.50
Aa1	$1.50 \leq x < 2.50$
Aa2	$2.50 \leq x < 3.50$
Aa3	$3.50 \leq x < 4.50$
A1	$4.50 \leq x < 5.50$
A2	$5.50 \leq x < 6.50$
A3	$6.50 \leq x < 7.50$
Baa1	$7.50 \leq x < 8.50$
Baa2	$8.50 \leq x < 9.50$
Baa3	$9.50 \leq x < 10.50$
Ba1	$10.50 \leq x < 11.50$
Ba2	$11.50 \leq x < 12.50$
Ba3	$12.50 \leq x < 13.50$
B1	$13.50 \leq x < 14.50$
B2	$14.50 \leq x < 15.50$
B3	$15.50 \leq x < 16.50$
Caa1	$16.50 \leq x < 17.50$
Caa2	$17.50 \leq x < 18.50$
Caa3	$\geq 18.50$

Finally, we consider whether the final rating should be adjusted to incorporate uplift from structural enhancements that may be incorporated in the company's financial arrangements. The effectiveness of any such enhancements is graded to determine the appropriate uplift, as described in the section "Structural Considerations and Sources of Rating Uplift from Creditor Protection" below. This allows us to apply the methodology to regulated water utilities that have adopted certain credit-enhancing structural features typical of highly-g geared financing structures.

**APPLYING THIS RATING METHODOLOGY / OUTLIER DISCUSSION**

Appendix II provides a table showing how each company maps for the specific sub-factors. We also highlight issuers whose grid-indicated performance for a specific factor or sub-factor is higher or lower by two or more broad rating categories from the actual rating and discuss general reasons for such outliers within a given factor or sub-factor.

**Rating Factor #1: Regulatory Environment & Asset Ownership Model****WHY IT MATTERS**

Regulated water utilities typically provide monopoly-type, price-inelastic services that lend themselves to high levels of business visibility and revenue stability. As a result, regulated water utilities – in line with other infrastructure operators – are likely to have a longer-term strategic and financial horizon than most other corporate sectors. Accordingly, assessing the historical and expected stability of the regulated water utility's business and cash flow generation is a critical component of our analysis. Generally speaking, revenues and cash flows are a function of tariff levels and the tariff-setting mechanisms. Tariffs are embedded in the broader framework of the applicable regulatory environment and/or a utility's concession agreement or lease contract. As such, the characteristics and track record of the regulatory regime or concession framework are key in assessing the overall stability of a water utility's business profile.

However, while this rating factor examines the extent to which mechanisms are in place to ensure the relative stability of a regulated water utility's cash flows, the question of whether the utility makes strategic decisions that may change its business conditions to the detriment of creditors is covered later in this methodology, in Rating Factor #3.

## Global Regulated Water Utilities

### **HOW DO WE MEASURE IT?**

We examine four sub-factors to assess a water utility's regulatory environment and business model, which are qualitative rank-orderings of risk based on Moody's examination of the relevant information and precedents:

- a. Stability & Predictability of Regulatory Environment
- b. Asset Ownership Model
- c. Cost and Investment Recovery (Ability & Timeliness)
- d. Revenue Risk

#### (a) Stability & Predictability of Regulatory Environment

This sub-factor captures the level of credit strength that derives from the regulatory and/or concession framework under which the water utility operates.

The essentiality of water and wastewater services usually means that services are provided on a monopoly or quasi-monopoly basis. Therefore the provision of water and wastewater services is commonly regulated on a national or regional basis. The stability and predictability of such regulatory regime is a key determinant in assessing a water utility's business risk profile, which is why this sub-factor has been assigned a weighting of 15%.

We assign the highest score of Aaa to the regulatory regime applied to the UK water sector (i.e. the water companies in England and Wales), which has a history of around 20 years and relies on clearly defined risk allocation principles, which have been consistently applied and transparently disclosed to the public.

Consequently, the lowest possible score will be assigned in a case where the jurisdiction of the issuer has not implemented a defined regulatory framework and/or has a track record of unilateral changes being made to the terms and conditions of the concessions in the water or similar infrastructure sectors that are relevant precedents, without suitable compensation being made to the concessionaire.

Concerns about the independence of the regulatory authorities and the risk of politically motivated intervention in the regulatory process will also result in a lower score.

For example, we assigned a single-B score to the regulatory framework applying to Bratislavská vodárenská spoločnosť, a.s. (BVS) of Slovakia, reflecting a history of political interference, which affected tariff decisions.

When assessing the scores for this sub-factor Moody's also takes into account the general rule of law within the jurisdiction in which the relevant utility operates, and whether an independent judiciary exists that allows for legal rights to be enforceable in practice. For a water company that is located in a country with generally poor institutional strength, the assigned score may be lower than the theoretical regulatory framework may imply.

#### (b) Asset Ownership Model

This Rating Methodology is designed to cover companies that own their assets outright in perpetuity or for a defined time horizon under a concession or other contractual agreement.<sup>6</sup>

In those cases where the water and wastewater assets are owned outright, Moody's assesses the implication of ownership rights that are subject to a licence and the risk of licence termination. Moody's also considers whether the right to operate the assets is long term in nature or may only be granted over a short-term period. If the time horizon of asset exploitation is limited, Moody's will also take into account the recovery mechanism in relation to any residual asset value at the end of a concession or other contractual arrangement when scoring this sub-factor.

A water company that owns all its key water and wastewater assets outright in perpetuity and has ultimate control over them would score the highest rating (i.e. Aaa). On the other end of the spectrum, a utility that holds the assets under a concession, which may be relatively short term or does not provide clear principles for the recovery of the residual asset value at the termination of the concession, would score relatively low (i.e. Ba or lower).

<sup>6</sup> Please refer to Appendix III for further details on the water industry sector and the different business models applied.



## Global Regulated Water Utilities

Most of the rated regulated water utilities own their key assets under a licence regime or long-term concessions. This is reflected in the relatively high scores achieved under this sub-factor. Outright ownership in perpetuity is less common, with the exception of Spain (e.g. AGBAR's Barcelona concession) and certain jurisdictions in Central and Eastern Europe.

If the assets are held under a concession, a utility's exploitation rights may be limited to the term of the concession, which will be reflected in the scoring. For example, Acquedotto Pugliese, an Italian municipal water utility, operates its assets on the basis of a concession that expires in 2018. Although, the legal framework protects the company from losing its concession without compensation, the mechanism for compensation is untested. This degree of uncertainty is reflected in the score of Baa for this sub-factor.

Similarly, SANEPAR operates pursuant to long-term concession agreements with various municipalities in the Brazilian state of Paraná, which own the related infrastructure assets. The Baa rating for this subfactor reflects the fact that over 60% of its concession agreements expire in the long term, with the average concession life between 20 and 30 years. These concession contracts have written provisions that entitle the company to the recovery of the assets' residual value at termination; however, these provisions have not been tested as, to date, the majority of the terminated concessions have been renewed. The company could score higher, once it has established a long-term track-record of concession renewal at termination.

Similar to the sub-factor above on the Regulatory Environment, also for this Asset Ownership Model sub-factor, we will consider the general rule of law, and the value and enforcement of asset property rights. For example, if there is a heightened risk of expropriation of assets for political reasons, we would score a company lower, even though it may own its assets. Moody's notes that the expropriation risk may be higher for water and wastewater assets than for other infrastructure assets, given the significance of the services provided.

In the US, this type of risk is generally seen as very limited, but could develop if the local government resorts to claiming "eminent domain" over the water system. This is currently the position Pennichuck Water Works faces in its service area. Although the long legal battle has certainly absorbed management's time and resources, Moody's has not taken any rating action because we believe any "fair value" proceeds paid for the system must be directed to debt repayment as per the terms of the outstanding obligations. However, we score the US water utilities as Aa instead of Aaa on the basis of this precedent.

(c) Cost and Investment Recovery (Ability & Timeliness)

As part of our assessment of the overall regulatory or concession regime, the ability of a regulated water utility to recover the cost of its operations and/or investment in a timely manner is another key determinant for the evaluation of the relative stability of cash flow generation. Whilst the first sub-factor under this Rating Factor #1 addresses the overall stability and predictability of the regulatory and/or concessionary framework, this sub-factor looks at the risk allocation between the water utility and its customers based on the tariff regime.

The most flexible arrangement is one where the water utility is free to adjust its tariffs as required, without any approvals or reviews by the relevant regulator or government. As a result, this type of arrangement would score Aaa for this sub-factor. This is clearly a situation unlikely to be encountered in practice. At the other end of the spectrum are mechanisms that do not adequately cover the operator's costs, potentially implying politically motivated low tariffs and hindering the viability of the utility in the absence of government support.

In general, most tariff formulas are designed to achieve a balance between reliability and quality of service standards, a degree of operational efficiency, protecting consumers from monopoly-overcharging and other social considerations, as well as allowing an adequate return for companies to satisfy their stakeholders (debt and equity capital providers).

The tariff formula applied under the UK regulatory framework, for example, allows for the recovery of operating expenditure and depreciation, which broadly resembles capital maintenance requirements, as well as a return on the regulated asset base set to cover the cost of funding through a combination of debt and equity. The return on capital thereby also reflects the funding cost of capital investments that grow the asset base. There is a moderate degree of risk allocation to the water utilities as cost recovery (both operational and financial) is based on ex-ante allowances set by the regulator at five-yearly price reviews.

## Global Regulated Water Utilities

We score the tariff regime in England and Wales at single-A reflecting the fact that there is strict regulatory oversight of tariff increases and that operators can be subject to challenging efficiency targets.

In the US, Moody's views each state individually and considers the various factors that affect the utilities' profitability, including the type of fixed- versus variable-rate design allowed, historically authorised ROEs, and the existence of riders or other mechanisms that permit recovery of operating and capital costs outside of a general rate case. Furthermore, we will take into account contractual obligations that restrict a water utility's ability to submit a rate case within a defined period of time. For example, in the rating of American Water Works, we previously took into consideration that following its purchase by RWE in 2001, it would agree not to seek rate increases in a number of states for a defined period of years. This led to some delay in the ability to request rate increases based on investments made in the interim period.

At the lower end of the spectrum we score the tariff formula and its application in single-B for BVS, based in Slovakia, and SANEPAR, based in Brazil.

In case of BVS, the application of a price cap formula based on an unclear efficiency factor resulted in flat water tariffs in recent years. The tariff setting is effectively largely politically driven, which depresses this score for BVS. Furthermore, the tariff formula applied for Slovakian water companies in general does not allow remuneration of maintenance expenditure for assets that had initially been funded through EU subsidies. Effectively, this keeps tariffs artificially low and inadequate to cover for the cost of asset consumption. Whilst revenues should in theory be sufficient to cover operating expenditure, which may support a Ba-score, there have been limited tariff increases in the recent past.

SANEPAR's concession contracts lack provisions for tariff adjustments, so water rates are set by the state government, leaving ample room for politically driven decisions. The company is rated at the lower end for cost and investment recovery because tariffs have been frozen since 2005.

In scoring this sub-factor we also consider whether the tariffs can actually be afforded by the users of the water and wastewater services. This could be measured for example through the level of unpaid bills. If the level of unpaid bills is very high we would score a water utility's ability to recover its costs lower than the theoretical tariff formula may imply. Acquedotto Pugliese is such an example: the tariff formula applied to the company, in theory, follows similar principles as the UK regime and allows for adequate investment recovery. However, in addition to the lack of transparency, which is captured by a lower score in the sub-factor on the Regulatory Environment, the Baa-score for Acquedotto Pugliese under this sub-factor reflects a very high level of bad debt outstanding more than 12 months, which effectively constraints its ability to fully recover its costs.

(d) Revenue Risk

Under this sub-factor we intend to assess the potential volatility of revenues generated by a regulated water utility. We assess this risk by taking into account such factors as a company's exposure to fluctuations in the volume of water used. Volume of usage may be affected by different weather patterns from year to year or a company's customer structure and reliance on a particular revenue stream. For example, if a water utility relies on one particular customer to generate a large proportion of its revenues and this customer decides to choose a different service provider or closes its operations, a significant portion of revenues could be lost. Similarly, a higher exposure to industrial customers or revenues generated from new housing developments may have a negative impact on demand patterns and therefore revenues in a recession scenario.

When scoring this sub-factor we also consider whether a regulatory regime may provide a certain element of protection, whereby companies may be allowed to adjust tariffs within a regulatory period or at the next price review to reflect the divergence of collected versus allowed revenues due to fluctuating volumes.

Issuers that are effectively immune from volume or other revenue volatility risks will score Aaa. Water companies that are not immune but subject to regulatory safeguards that allow them to adjust tariffs under a tested and transparent procedure will score Aa or single-A, depending on the degree of protection provided. Water utilities that are exposed to seasonality or weather effects and/or change in demand patterns, which result in revenue volatility in excess of high single-digit percentages would generally score lower than Baa for this sub-factor. Furthermore, water utilities with a generally higher reliance on new connections and or revenue concentration risk to particular customers or vulnerable industry sectors will generally score Baa to Caa, depending on the potential volatility of revenues.

## Rating Methodology

## Moody's Global Infrastructure Finance

## Global Regulated Water Utilities

For pure asset owners, which may have subcontracted the operations of the water and/or wastewater assets to a different party. However, we will shade the scoring based on the estimated credit quality of the operating counterparty, given that the asset owner may rely solely on a lease payment from one single contract party.

**RATING GRID MAPPING**

The following table shows the full mapping of each sub-factor to a broad rating category and the weighting of each sub-factor within Rating Factor #1.

Rating Category	Aaa	Aa	A	Baa	Ba	B	Gaa	Weighting
<b>(a) Stability and Predictability of Regulatory Environment</b>	Regulation is independent, well established (>15 years of being predictable and stable) and transparent (published methodologies clearly define risk allocation between companies and customers and are consistently applied, with public or shared financial model)	Regulation is independent, reasonably well established (>10 years of being predictable and stable) and transparent (published methodologies clearly define risk allocation between companies and customers and are generally consistently applied)	Regulation is generally independent and developed (published methodologies set out principles of risk allocation between companies and customers and are based on established precedents in the same jurisdiction), and has above average predictability and reliability, although regulatory regime may be sometimes less supportive of utilities	Regulatory framework is well developed, with evidence of some inconsistency or unpredictability in the framework's application  OR  Regulatory framework is relatively new and untested, but methodologies are based on established precedents and jurisdiction has history of independent and transparent regulation for other utility services	Regulatory framework is defined but there is a high degree of inconsistency or unpredictability in its application; tariff setting is subject to negotiation and political interference; there has been a history of difficult or less supportive regulatory decisions; some precedents in the country of predictable regulation for other utility services	Regulatory framework is unclear, untested or undergoing significant change, with a history of political interference  Utility regulatory body lacks a consistent track record and appears unsupportive, uncertain or highly unpredictable	Regulatory framework is not defined, unpredictable or politically driven	15.00%
<b>(b) Asset Ownership Model</b>	All key water and/or sewerage assets held outright in perpetuity	All key water and/or sewerage assets held outright under licence which can be terminated for underperformance, failure to meet certain financial parameters or insolvency	All key water and/or sewerage assets held under long-term concession with clearly defined right to recover value of residual assets at termination/end of concession but underpinned by highly rated entity but with undefined timeframe	All key water and/or sewerage assets held under long-term concession with entitlement to recover value of residual assets at termination/end of concession but procedures untested/undefined	All key water and/or sewerage assets held under concession with recovery of residual asset value at termination/end of concession subject to negotiation	All key water and/or sewerage assets held under concession with no recovery of residual asset value at termination/end of concession	Issuer is in default under its licence, concession or lease/contract, likely to lead to termination  Expropriation highly likely, no prospect of compensation	10.00%
		OR		OR	OR	OR		
		held under long-term concession with clearly		OR	held under short-term operating leases or mgmt	held under short-term operating leases or mgmt contract		

## Rating Methodology

## Moody's Global Infrastructure Finance

## Global Regulated Water Utilities

Rating	Aaa	Aa	A	Baa	Ba	B	Caa	Weighting
		defined right to timely recovery of residual asset value at termination/end of concession underpinned by highly rated entity; clear track record of consistently applying concession termination / recovery regime	OR held under medium-/ long-term operating leases or mgmt contract with very substantial portfolio diversification, very established market position and very high renewal rate (>95%)	held under medium-/ long-term operating leases or mgmt contract with substantial portfolio diversification, established market position and high renewal rate (>90%)	contract with good degree of portfolio diversification and renewal rate (>80%)  Expropriation possible, but some prospect of compensation	(limited portfolio diversification)  Expropriation likely, little or no prospect of compensation		
(c) Cost and Investment Recovery (Ability & Timeliness)	No regulatory or contractual impediment to adjust tariffs (no approval or reviews required)	Tariff formula allows for timely recovery of operating expenditure including depreciation and a fair return on all investment  Depreciation allowance fairly reflects asset consumption  All capital expenditure is included in asset base as incurred or fully covered by specific riders/surcharges prior to the next rate case  Minimal challenges by regulators to companies' cost assumptions	Tariff formula allows for recovery of operating expenditure including depreciation based on allowances set at frequent price reviews (5-yearly intervals or shorter) and a fair return on all efficient investment  Depreciation allowance fairly reflects asset consumption  Capital expenditure is included in asset base as incurred or partially covered by specific riders/surcharges prior to the next rate case  Opex and capex can be subject to efficiency tests  Limited instances of regulatory challenges; limited delays to rate or tariff increases or cost recovery	Tariff formula allows for recovery of operating expenditure including depreciation and return on investment but subject to retrospective regulatory approval or infrequent price reviews (> 5-yearly intervals)  Some instances of revenue back-loading (e.g. depreciation allowance set below asset consumption or operating expenditure is capitalised)  OR  Rate/tariff reviews and cost recovery outcomes are usually predictable, although application of tariff formula may be unclear; potentially greater tendency for regulatory intervention and/or to disallow or delay costs	Tariff formula does not take into account all cost components and depreciation is set below asset consumption  Revenues allow coverage of most operating expenditure  But investment is not clearly or fairly remunerated  OR  Rate/tariff reviews are inconsistent, with some history of unwillingness to make timely rate changes	Tariff formula does not take into account all cost components and depreciation is set below asset consumption  Revenues only cover cash operating expenditure  OR  Highly uncertain rate reviews and cost recovery outcomes; regulators may engage in second guessing or spending decisions or deny rate increases to fund ongoing operations	Revenues only partially cover cash operating costs	12.00%

## Rating Methodology

## Moody's Global Infrastructure Finance

## Global Regulated Water Utilities

Rating Category	Aaa	Aa	A	Baa	Ba	B	Gaa	Weighting
(d) Revenue Risk	No exposure to volume or customer concentration risk	<p>Little exposure to volume risk and/or timely recovery mechanism</p> <p>Little concentration of volumes and revenues to one particular customer</p>	<p>Some exposure to volume risk but recovery mechanism with some delay through regulatory price review; generally limited volatility expected</p> <p>Some concentration of volumes and revenues to one particular customer</p>	<p>Moderate exposure to volume risk but recovery mechanism with some delay through regulatory price review; moderate volatility expected</p> <p>AND/OR</p> <p>Moderate concentration of volumes and revenues to one particular customer and/or industry sector</p>	<p>Significant exposure to volume risk but recovery mechanism, which may not follow regular intervals; significant volatility expected</p> <p>OR</p> <p>Significant concentration of volumes and revenues to one particular customer and/or industry sector</p>	<p>High exposure to volume risk with no clear recovery mechanism</p> <p>OR</p> <p>High concentration of volumes and revenues to one particular customer and/or industry sector</p>	<p>Very high exposure to volume risk with no existing recovery mechanism</p> <p>OR</p> <p>Very high concentration of volumes and revenues to one particular customer and/or industry sector</p>	3.00%

## Rating Factor #2: Operational Characteristics & Asset Risk

### WHY IT MATTERS

The regulatory framework and business model are important; however, a water utility's overall credit quality is also influenced by its operational performance and by the size and complexity of its capital programme. This second rating factor focuses on those factors related to the operational efficiency and asset quality of a regulated water utility that are most likely to influence its future financial position.

### HOW DO WE MEASURE IT?

In assessing the operational characteristics and asset risk of a water utility, we use the following sub-factors:

- Operational Efficiency
- Scale & Complexity of Capital Programme & Asset Condition Risk

The first sub-factor is a qualitative assessment based on public information or discussions with management. The second sub-factor is a quantitative measure based on publicly available information (where public information may be limited, Moody's will base its assessment on our own estimates), supported by qualitative data on the absolute asset condition of a company.

#### (a) Operational Efficiency

This sub-factor is designed to measure the degree of efficiency in operational performance in the context of the relevant indicators assessed by the regulatory bodies in the country or area of operation. We do not intend to measure the operational performance in terms of absolute standards, as a company's cost structure and asset base may be the result of historically embedded characteristics.<sup>7</sup>

Examples of performance standards are water quality, water pressure, level of leakage, number and length of service interruptions, sewer flooding or the general level of customer service. Furthermore, we take into account (where such information is available) the amount of operational and/or capital expenditure in comparison with the regulatory allowances, and a company's track record in out- or underperforming such

<sup>7</sup> For example, at the time of their privatisation in 1989 the water utilities operating in England and Wales inherited a relatively old asset base, which could be considered of a comparatively low standard and condition due to years of underinvestment in maintenance. However, under the regulatory regime the water companies have been set clear targets to improve asset and service quality. Therefore, these companies are judged on their relative performance in achieving these goals through comparative competition with their industry peers, and not on their absolute performance.

## Global Regulated Water Utilities

allowances. We would expect that all water utilities are monitored in respect of specific performance measures either by regulators or other supervisory authorities, such as environmental agencies or government ministries. However, if we were to encounter a case where no such monitoring is conducted, we would score the respective company in the single-B category for this sub-factor to reflect the limited insight into the company's operational performance.

Consistent profitability with strong operating margins despite a challenging tariff model may also indicate efficient operations, although this would have to be viewed in light of the company's overall asset condition.

The grid is designed so that utilities that are performing in line with regulatory assumptions or the general national average would score Baa, whilst out- or underperforming companies would score higher or lower, respectively.

### (b) Scale & Complexity of Capital Programme & Asset Condition Risk

This sub-factor considers the risk associated with a substantial capital programme, which may expose a water utility to execution risks and potential cost overruns. It is meant to capture the general operational risk of dealing with an extensive capex programme and/or very complex investment projects. The financing risk that a significant capex programme may pose, if it cannot be funded out of operating cash flows, is addressed as part of Factor #4 Key Credit Metrics.

This sub-factor is a quantitative assessment of capital expenditure in the context of the relevant asset base. This would be either a Regulated Asset Base where this concept is applied or the Fixed Assets (tangible and intangible)<sup>8</sup> as reported in a company's statutory accounts.

For the purpose of this sub-factor, capital expenditure is measured before any government grants, construction subsidies or developers' contributions, to assess the full scale of the investment programme and potential execution risk.

Overall, water utilities with a relatively low capital investment requirement compared to their existing asset base would be considered less risky and would likely achieve a high score for this sub-factor. On the other hand, companies facing a very large investment programme compared to their asset base and/or projects of high technical complexity would score at the lower end of the spectrum.

We note that it is not uncommon in the water sector for subsidies from governmental authorities to customers to be embedded in the economic model of water utilities, particularly if these utilities rely only on customer tariffs to cover their costs and earn a return on their invested capital.

For example, the asset value of companies that have been privatised may not reflect the actual replacement costs of such assets and companies may be required to undertake very large capital investment programmes to maintain and upgrade their infrastructure compared to a relatively small regulatory asset base. These companies would score lower under this sub-factor. The operational leverage of these water utilities is effectively higher, notwithstanding the fact that water utilities may still be compensated for the embedded replacement costs as part of the water tariffs to enable them to achieve a fair market return on their investment.

Some regulatory frameworks or concession regimes may limit a company's exposure to capex-related risks, such as cost overruns. In these instances, the score under this subfactor may be adjusted to reflect regulatory arrangements that limit the water utility's exposure to cost overrun risks.

When scoring this sub-factor we will also take into account the underlying asset condition and the related risk of potential asset failure. A functioning asset base is paramount for the water and wastewater utilities to comply with their regulatory duties and ensure stability of future cash flow generation. Therefore, if a water utility has a history of serious asset failures or exhibits a significant deterioration in asset performance, it will achieve a score of Ba or lower under this sub-factor, depending on the severity of failures. Low scores for this sub-factor would primarily be expected for water utilities in emerging markets, whilst we would expect water utilities in developed countries to have a reasonably high asset quality.

<sup>8</sup> We include intangible assets in the equation as companies may report their concession assets as intangibles. However, we do not include Goodwill as part of the Fixed Assets, on which the company will earn a return.

Rating Methodology

Moody's Global Infrastructure Finance

Global Regulated Water Utilities

**RATING GRID MAPPING**

The following table shows the full mapping of each sub-factor to a broad rating category and the weighting of each sub-factor within Rating Factor #2.

Rating Category	Aaa	Aa	A	Baa	Ba	B	Gaa	Weighting
<b>(a) Operational Efficiency</b>	Consistently achieves maximum results on all relevant performance measures (both cost efficiency and service levels)	Track record of very high performance (consistently at the efficiency frontier and in the top 10% on relevant key performance measures)	Consistent track record of outperforming regulatory opex and capex targets; above national average on relevant key performance measures	Performance in line with national average; no history of material opex and/or capex overruns	Some history of material opex and/or capex overruns; below national average on relevant key performance measures	Currently experiencing serious capex and/or opex overruns; poor track record on relevant key performance measures	Very serious cost overruns or service failures could put issuer in default under its licence, concession or lease/contract	5.00%
<b>(b) Scale and Complexity of Capital Programme &amp; Asset Condition Risk</b>	Annual total capital expenditure (maintenance & enhancement) ≤ 4% of total fixed assets or regulated asset base  AND/OR  No asset condition risk (i.e. full and immediate cost pass-through)	Annual total capital expenditure (maintenance & enhancement) > 4% ≤ 6% of total fixed assets or regulated asset base  AND/OR  Well-developed asset base under tight regulatory supervision; asset performance is generally stable or improving	Annual total capital expenditure (maintenance & enhancement) > 6% ≤ 8% of total fixed assets or regulated asset base  AND/OR  Well-developed asset base and no history of serious asset failure; asset performance is generally stable or improving	Annual total capital expenditure (maintenance & enhancement) > 8% ≤ 12% of total fixed assets or regulated asset base  AND/OR  Company has a reasonably developed asset base; may have some precedents of serious asset failures but asset performance is now broadly stable	Annual total capital expenditure (maintenance & enhancement) > 12% ≤ 20% of total fixed assets or regulated asset base  OR  Small number of large and complex projects accounts for majority of capital programme  AND/OR  Asset base not fully developed; average asset performance is gradually deteriorating or there is some uncertainty about asset condition	Annual total capital expenditure (maintenance & enhancement) > 20% ≤ 30% of total fixed assets or regulated asset base  OR  One large and complex project accounts for majority of capital programme  AND/OR  Performance of most assets is materially deteriorating, with serious assets failures likely or ongoing	Annual total capital expenditure (maintenance & enhancement) > 30% of total fixed assets or regulated asset base  OR  Capital programme includes one or more large projects of extreme technical complexity  AND/OR  Rapidly deteriorating asset performance or condition could put issuer in default under licence, concession or lease/contract likely to lead to termination	5.00%

## Global Regulated Water Utilities

**Rating Factor #3: Stability of Business Model and Financial Structure****WHY IT MATTERS**

This rating factor is intended to identify the likelihood that event risk could add uncertainty to future cash flow levels and divert resources away from creditors. Such decisions are a function of the ability and willingness of management and shareholders to change the business focus and the financial structure of the company. The ways in which a company will choose to address the needs of its different investors (e.g. shareholders and creditors) has a material impact on its overall credit quality.

**HOW DO WE MEASURE IT?**

Our assessment of shareholder and company strategy hinges on three sub-factors:

- a. Ability and Willingness to Pursue Opportunistic Corporate Activity (M&A, Disposals and Investments)
- b. Ability and Willingness to Increase Leverage
- c. Targeted Proportion of Operating Profit Outside Core Water and Wastewater Activities

**(a) Ability and Willingness to Pursue Opportunistic Corporate Activity**

This sub-factor allows us to score the risk that corporate activity, in the form of mergers and acquisitions, major disposals and investments, will impact future credit quality. We consider whether restrictions exist on management's discretion to pursue opportunistic investments, business combinations and other significant corporate initiatives that would alter the issuer's credit profile. Such restrictions can be regulatory, e.g. through licence conditions as is the case for the UK water sector, or contractual, e.g. through ring-fencing covenants.

In the absence of formal restrictions, we consider management's and shareholders' track record and objectives to gauge the future likelihood and potential impact of corporate activity. In essence, we assess how future cash flows are likely to be applied, and what the balance will be between cash flows applied to repay creditors and those applied to make investments to bolster shareholder returns.<sup>9</sup>

Based on the above considerations, the highest possible score for this sub-factor (which we deem commensurate with the Aaa category) entails a prohibition on the water utility from engaging in any form of corporate activity, either because of the specific mandate incorporated in the licence / concession agreement, the company's bylaws or other binding agreements (e.g. a contract with the state), or because of explicit covenant restrictions in financing agreements. We will score all other situation Aa through to single-B or Caa, depending on management's appetite for opportunistic corporate activity.

**(b) Ability and Willingness to Increase Leverage**

This sub-factor addresses the likelihood that a company may change its capital structure, based, again, on the degree of discretion available to management and shareholders, their strategy and track record.

A water utility with a conservative financial strategy that, in incurring additional indebtedness, would not compromise minimum financial parameters would score as a Baa for this sub-factor.

There is a distinction between the risk characteristics captured under this Rating Factor #3 and those considered in Rating Factor #4: Key Credit Metrics. Under Rating Factor #4, we assess an issuer's prospective financial profile based on its stated business plan and financial policies and on our views of the main variables affecting future cash flow generation (e.g. revenues, costs, capital expenditure). Any specific transaction that an issuer is committed to or very likely to execute would be factored into our financial projections. Conversely, under Rating Factor #3, we assess the risk that future corporate activity, not identifiable yet, may alter an

<sup>9</sup> The nature of the water utility's shareholders does not have a direct impact on credit quality, except in situations where GRI or other similar considerations apply. Rather, the intentions and priorities of shareholders may affect how we score this particular sub-factor. This sub-factor can be particularly important in situations where shareholder structures are in flux. For example, a shift towards private ownership may also entail a shift towards an increasing focus on shareholder value resulting in more shareholder friendly policies. However, a government-owned water utility may also be subject to high event risk if the government is seeking to extract dividends from the utility to apply to national budget considerations (e.g. investments in other types of infrastructure).



## Global Regulated Water Utilities

operator's current business and financial risk profile and the risk that current financial policies will be abandoned in pursuit of higher financial leverage.

Also considered is an issuer's willingness to issue equity to maintain its credit profile and mitigate the effects of increasing leverage. As the water utility sector is very capital intensive, negative free cash flows due to construction programmes are sometimes financed with short-term debt and then refinanced with longer-term debt offerings and common equity. Issuers that delay issuing equity (or holding companies that delay the "down-streaming" of equity to an operating subsidiary) to avoid dilution or concerns over book value per share may see pressure on the rating over time, particularly if the dividend policy is viewed as aggressive.

### (c) Targeted Proportion of Operating Profit Outside the Core Water and Wastewater Activities

Shareholder returns may be enhanced by investing in businesses outside the core concession, with higher return expectations (e.g. a water technology service or construction & engineering business built on the expertise of the utility in the water and wastewater sector). Such investments typically entail higher risk than the usually regulated core water and wastewater activities and we generally view substantial investments outside the core concession area as a credit negative. This sub-factor is designed to adjust for the influence that contributions from higher-risk non-regulated business may have on a utility's financial performance and credit metrics.

Within the rating grid, the lowest possible score is attributed to an operator targeting over 20% of Operating Profit originating outside its core regulated activities (when the credit analysis may require a "blended" approach of the different businesses to assess the company's consolidated credit profile).

It is important to define the "core" water and wastewater activities. Generally, we would regard all regulated activities related to the abstraction, treatment, distribution and supply of water, as well as the collection and treatment of wastewater as core. These activities could be conducted under a licence or concession regime. For the avoidance of doubt, where a utility holds a number of different licences, concessions or contracts for separate regions or service areas, we would view the aggregate activities under such arrangements as being a single core business activity for the purposes of this rating grid.

### ***A NOTE ON APPLYING RATING FACTOR #3 TO FINANCING STRUCTURES WITH CREDIT-ENHANCING FEATURES***

Where we deem that the event risk protection included in a financing structure is strong, the score for the sub-factors in Rating Factor #3 would usually be higher than for a utility that does not benefit from such protection. Therefore, the scoring would automatically add a degree of uplift to the final rating outcome. In other words, the rating uplift generated by event risk protection is achieved through the scoring of sub-factors in Rating Factor #3.

This is discussed in greater detail below in the section on Structural Considerations and Rating Uplift.

## Rating Methodology

## Moody's Global Infrastructure Finance

## Global Regulated Water Utilities

**RATING GRID MAPPING**

The following table shows the full mapping of each sub-factor to a broad rating category and the weighting of each sub-factor within Rating Factor #5.

Rating Category	Aaa	Aa	A	Baa	Ba	B	Caa	Weighting
(a) Ability and Willingness to Pursue Opportunistic Corporate Activity (M&A, Disposals & Investments)	Covenants prohibit all corporate activity OR Corporate activity is outside of management mandate	Covenants or licence/concession largely limit corporate activity, with exception of certain defined permitted investments	Strong track record of no material corporate activity and stated intention to refrain from M&A and major investments	Moderate, may impact credit metrics for 18-24 months only	Track record of repetitive, sizeable transactions	Highly likely to conduct frequent and very large opportunistic investments		3.33%
(b) Ability and Willingness to Increase Leverage	No additional indebtedness allowed without debt holders' consent	Additional indebtedness only allowed for capex under debt covenants and/or licence/concession terms	Financial covenants in principal debt instruments limit management ability to materially increase leverage	Conservative financial strategy, unlikely to compromise minimum financial parameters	Limited track record of consistent financial policies; likely to target high leverage	Track record of aggressive financial policies and very high leverage; likely to pay out creditors' financial cushion ahead of business pressures		3.33%
(c) Targeted Proportion of Operating Profit outside Core Water and Wastewater Activities	0% (=exclusive focus on core water and wastewater services) OR Covenants prohibit all other businesses	0-5% OR Covenants largely limit non-concession businesses, with exception of certain defined and low risk permitted businesses	5-10%	10-15%	15-20%	>20%		3.33%

**Rating Factor #4: Key Credit Metrics****WHY IT MATTERS**

The first three rating factors aim to capture the credit strengths and weaknesses afforded by the water utility's fundamental business and its financial policies. However, a company's ultimate credit profile must also incorporate its financial metrics. Two otherwise identical water utilities may exhibit radically different credit profiles due to different financial metrics.

When examining credit metrics, there is no single measure that invariably predicts the likelihood of default. We utilise metrics that measure both (i) the absolute capacity of the issuer to service its debt and (ii) the size of its debt burden relative to those of its peers. Leverage ratios aim to capture different measures of how easily an issuer can repay its debt; coverage ratios focus more on the ability to service the debt prior to repayment but may also take into account the necessary maintenance investments to ensure that the future cash flow generation is not impaired.

**HOW DO WE MEASURE IT?**

We use four key credit metrics when examining a water utility. Importantly, when examining credit metrics, our ratings also incorporate our "expected case", i.e. how we believe the metrics will evolve over the foreseeable future. The three credit metrics are:

- Adjusted Interest Coverage OR FFO Interest Coverage
- Net Debt to Regulated Asset Base (or Fixed Assets) OR Debt to Capitalisation
- FFO to Net Debt
- Retained Cash Flow (RCF) to Capex

## Global Regulated Water Utilities

These credit metrics will be calculated after making Moody's standard adjustments,<sup>10</sup> including for off-balance sheet debt and debt-like obligations and certain other re-classifications in the income statement and cash flow statement.

(a) Adjusted Interest Coverage OR FFO Interest Coverage

We use an interest coverage ratio that reflects that a proportion of the water tariffs, and therefore a water utility's cash flows, may not be available for debt service as it needs to be reinvested in the ongoing maintenance of the asset base.

As such, the Adjusted Interest Coverage ratio resembles more an EBIT Coverage or Debt Service Coverage ratio (assuming debt service consists primarily of interest payments). It aims to measure the amount of "headroom" afforded by the company's cash flows in servicing its debt burden after taking into account the cost of maintaining a stable asset base.

For water utilities whose regulatory tariff regime includes an allowance for depreciation in the revenue building block, we believe that EBITDA- or FFO-based interest coverage may limit the comparability of companies coverage, as the cash-flow generation to some extent depends on depreciation policies.<sup>11</sup> However, where the tariff formula is not based on consideration of Capital Charges, Moody's will use its standard FFO Interest Coverage Ratio with alternative banding.

The formula for the Adjusted Interest Coverage ratio is a variation on the FFO Interest Coverage used by Moody's for many corporate sectors. The standard FFO Interest Cover is adjusted for (i) the regulatory Capital Charges funded through revenues, and (ii) Non-Cash Interest expense where appropriate. It is also calculated on a net interest basis as follows:

$$\frac{\text{FFO} + (\text{Net Interest Expense} - \text{Non-Cash Interest}) - \text{Capital Charges}}{(\text{Net Interest Expense} - \text{Non-Cash Interest})}$$

Funds from Operations ("FFO"), which reflects Cash Flows from Operations ("CFO") excluding working capital movements, is a relevant measure of cash flows for water utilities, since working capital movements are typically not material; any unusual movements in working capital tend to be small one-off movements tied more to normal operating activities than to any strategic decisions.<sup>12</sup> FFO is net of the interest expense from the income statement, whether or not such interest expense translates fully into a cash payment, with adjustments made to issuers' financial statements as necessary if non-cash interest is material.

Net Interest Expense, based on the issuer's reported figures, incorporates our standard adjustments to interest expense (for example, re-classifying the interest component of operating lease rental expense). We use the amount of interest expense net of interest income, as many of the rated water companies tend to pre-fund their capital programme and hold significant amounts of cash on-balance sheet. Non-Cash Interest is deducted from Net Interest Expense only when appropriate in the context of the regulatory financial model. In the UK, for example, the regulatory regime provides a real rate of return so revenues and the regulatory asset base are adjusted for inflation and Moody's excludes the indexation element of index-linked debt in calculating the Net Interest Expense. The indexation is however captured by the leverage ratio as it increases the outstanding debt amount.

The regulatory Capital Charges represent the portion of revenues (and thus FFO) that is not available to cover a utility's debt service because it needs to be allocated to the replenishment of the asset base. The

<sup>10</sup> See Moody's Rating Methodology: "Moody's Approach to Global Standard Adjustments in the Analysis of Financial Statements for Non-Financial Corporations – Part II Standardized Adjustments to Enable Global Consistency for Issuers Reporting under International Financial Reporting Standards ('IFRS')", February 2006, and Rating Methodology: "Moody's Approach to Global Standard Adjustments in the Analysis of Financial Statements for Non-Financial Corporations – Part I Standardized Adjustments to Enable Global Consistency for US and Canadian GAAP Issuers", February 2006.

<sup>11</sup> For further details, please see Moody's Special Comment: "UK Water Sector: Key Ratios Used by Moody's in Assessing Companies' Credit Strength", March 2006.

<sup>12</sup> For example water companies in the UK historically had fairly negligible working capital movements due to (i) the changes in the water charges (K-factor) being small or negative resulting in limited turnover growth, and (ii) small debtor balances at the year-end as the domestic customer base was largely billed in advance on the basis of unmeasured supplies. However, as customers switch from unmeasured to measured supply payment patterns may change. Measured water supplies are invoiced every six months in arrears, with the billing date being a function of the date when the meter is installed. Consequently, the effect of customers switching to measured supplies is a significant delay in the receipt of payments for the same supply (i.e. from up to 12 months in advance to up to 8-9 months in arrears). These dynamics lead to additional cash requirements and an increase in the working capital (debtors) of the water companies (i.e. negative cash movement). However, this negative effect on working capital is normally expected to reverse once measured customers start to pay their bills via direct debit.

## Global Regulated Water Utilities

maintenance of a stable asset base will ensure that the earned return does not fall due to a decline in the asset base. Depending on the regulatory financial model (for example, whether it is based on statutory historic cost financial statements or regulatory current cost financial statements), Capital Charges could correspond to regulatory depreciation,<sup>13</sup> accounting depreciation, maintenance expenditure or an equivalent concept.

(b) Net Debt to Regulated Asset Base (or Fixed Assets) OR Debt to Capitalisation

For regulated water utilities we measure leverage as Net Debt to Regulated Asset Base (or Fixed Assets, if applicable), reflecting a loan-to-value ratio. The denominator for this ratio can be the Regulated Asset Base or similar concept, if regulatory financial statements are used for the analysis, or it can be total Fixed Assets, if statutory financial statements are used. Fixed Assets would include tangible and intangible assets, but not Goodwill, given that companies would usually only earn a return on the actual water and wastewater assets. This ratio is designed to measure the leverage as a proportion to the capital invested, on which the company is allowed to earn a return. As such the Regulated Asset Base also resembles the net present value of the future cash flow earnings potential of a water utility.

We use Net Debt given the sector's propensity to pre-fund the significant capital investments which can result in substantial cash amounts held on balance sheet and also recognising the requirements under certain financing structures to maintain liquidity and debt service reserves.

Rating committees may also consider the ratio of Total Debt to Total Capitalisation, as an alternative measure of the issuer's leverage relative to its total capital base.

(c) FFO to Net Debt

This ratio is one of Moody's most commonly used measures of dynamic leverage. We note that this measure does not take into account the need of maintenance investments when comparing cash flows to future debt repayments. However, it also allows a wider comparison across industries on a global basis and can be a useful indicator of a company's ability to generate cash flows if monitored over a period of time.

The numerator for this ratio is FFO as defined above. Again, we use Net Debt for the calculation of this ratio. However, in situations where our assumptions on pre-funding may prove incorrect or the cash reported on the balance sheet is restricted for a specific purpose and unavailable to service the debt, Gross Debt may be applied. Discretion is given to the analyst and to the rating committee to consider Gross Debt instead of Net Debt. For example, for issuers that are near speculative or speculative grade, Net Debt may not be used to calculate this metrics, as the cash on the issuer's balance sheet may be used for collateral postings. Furthermore, where the debt position of a company may be overstated or understated by the debt figures as reported in the financial statements, we would also make the appropriate adjustments.<sup>14</sup>

(d) RCF to Capex

This ratio shows the extent to which a water utility is able to fund capital expenditure internally. Moody's does not regard capital expenditure undertaken by a utility to upgrade its network as a negative rating factor in itself, as additional investments may be remunerated through tariff increases. However, we view positively the financial flexibility enjoyed by a utility with limited capex requirements easily funded by internally generated cash flows. Such a company would not need to access the markets to raise additional finance and may have a wider range of options to react to changing economic circumstances.

However, we would also caution that a company that generates large financial surpluses that are paid out to shareholders may not actually retain a high degree of flexibility in downturns if management is unwilling to cut distributions. Thus this ratio takes into account the magnitude of dividend payments.

The formula for the RCF to Capex ratio is the following:

<sup>13</sup> For example, under the UK regulatory regime, the regulatory capital charges are Infrastructure Renewals Charge (IRC) and Current Cost Depreciation (CCD). Both IRC and CCD form part of the allowed revenue that the regulator determines, and are thus an integral part of companies' cash flows. The IRC represents the cost of maintaining underground assets at a constant level of functionality and as such is based on an average of infrastructure renewals expenditure calculated by the regulator Ofwat over a period of 15 years. The CCD relates to above-ground assets with a limited life and is, in principle, calculated in line with accounting depreciation criteria. However, for the majority of CCD that relates to the original assets transferred at privatisation and thus acquired with a large discount to the asset replacement value, the standard accounting approach cannot be applied and CCD is calculated with reference to the current replacement cost. Ofwat follows the principle that over the long term (approximately 28 years), for a pool of assets which is stable in terms of outputs generated, the CCD charged should be comparable to the capital expenditure required to maintain and replace the assets.

<sup>14</sup> The most common instances where the need for this type of debt adjustments may arise are linked to derivative transactions.

## Rating Methodology

## Moody's Global Infrastructure Finance

## Global Regulated Water Utilities

FFO – Dividends Paid

## Capex

Capex comprises additions to both tangible and intangible fixed assets, but will be net of any government grants, subsidies or developers' contributions received for the purpose of calculating this ratio. We use Capex net of subsidies when scoring this sub-factor, as it is meant to address the financing risk related to the investment programme, which only refers to the portion that needs to be funded by the company.

Other metrics that are considered in rating committees include Debt to Capitalisation, which as mentioned above can be used as a proxy for the sub-factor ratio described in 4(b). To assess the impact of the level of dividend payments on a company's financial profile, Moody's may also consider RCF to (Net) Debt or dividend payout ratios.

**ASSUMPTIONS FOR FINANCIAL RATIO CALCULATIONS**

Given that the economic model of the water and wastewater industry generally offers good medium-term visibility, financial projections typically provide a useful tool to enhance credit analysis. In mapping a company's credit metrics to broad rating categories as indicated in the grid below, we could focus exclusively on historical credit metrics or exclusively on projected metrics, or use a mixture of both. In fact, we use historic credit metrics in situations where we believe that these are representative of the financial structure pursued by management (based on a track record), or where we believe that forecast improvements are uncertain. For companies that have a history of using financial headroom to make new investments or to increase distributions to shareholders, we map using historic credit metrics, without factoring in the benefit of any reduction in leverage and associated improvement in credit metrics that may be shown in the financial projections based on current operations. Conversely, in cases where we believe that there is a high probability that a company's credit metrics will improve or deteriorate, we map using the prospective ratios.

For the purpose of this report, we have generally used a three-year average of the latest historical information. However, if updated information is publicly available, e.g. in relation to potential changes in a company's capital structure as has been the case for Veolia Water Central Limited (formerly Three Valleys Water Plc), we have already reflected this in the scoring for the credit metrics. Furthermore, for water utilities funded under a highly leveraged capital structure, as is the case for a number of the UK issuers, which form the largest group of rated issuers, we have taken into account certain cash-trapping financial covenants when assessing the utilities' positioning, particularly with respect to the Adjusted Interest Coverage and the Net Debt to Regulated Asset Base.

**RATING GRID MAPPING**

The following table shows the full mapping of each sub-factor to a broad rating category and the weighting of each sub-factor within Rating Factor #4.

Rating Category	Aaa	Aa	A	Baa	Ba	B	Gaa	Weighting
(a) Adjusted Interest Cover	>8.0x	4.5-8.0x	2.5-4.5x	1.5-2.5x	1.2-1.5x	1.0-1.2x	<1.0x	15.00%
OR	>10.0x	7.0-10.0x	4.5-7.0x	2.5-4.5x	1.8-2.5x	1.5-1.8x	<1.5x	
FFO Interest Cover								
(b) Net Debt / Regulated Asset Base (or Fixed Assets)	<25%	25-40%	40-55%	55-70%	70-85%	85-100%	>100%	15.00%
OR								
Debt/Cap								
(c) FFO / Net Debt	>40%	25-40%	15-25%	10-15%	6-10%	4-6%	<4%	5.00%
(d) RCF / Capex	>3.5x	3.5-2.5x	1.5-2.5x	1.0-1.5x	0.5-1.0x	0.25-0.5x	<0.25x	5.00%

## Global Regulated Water Utilities

**Structural Considerations and Sources of Rating Uplift from Creditor Protection**

Regulated water utilities are financed under different financing structures. In particular, large regulated water utilities are becoming more highly leveraged as a result of changes in ownership and other corporate activity and may have to agree to creditor protection arrangements. Such arrangements are most common in the UK. A transition from a publicly listed model to private ownership by infrastructure, pension and other specialist funds has led to the adoption of financing structures that incorporate structural enhancements, which are often seen in project finance transactions in various infrastructure sectors.

Moody's believes that in the water sector structural enhancements may provide valuable creditor protection and be a source of rating uplift. We have classified the sources of rating uplift from creditor protection into three categories:

- Event risk protection
- Debt structure and liquidity protection
- Control afforded to creditors

For each category, we look at specific concessions made to creditors and score their effectiveness on a scale of five grades: "none", "low", "medium", "high" and "very high".

Legal considerations are typically important to determine the value of protective arrangements in the jurisdiction(s) that are relevant to a toll road operator's specific financial arrangements.

(i) Event Risk Protection

In this category, we typically review restrictive covenants including:

- Restrictions on permitted business outside the core water and wastewater activities
- Restrictions on acquisitions/disposals
- Restrictions on investments
- Restrictions on additional indebtedness

As we have discussed above, if these and similar restrictions are effective to remove event risk, the sub-factors under Rating Factor #3: Stability of Business Model & Financial Structure for Creditors will be scored higher (between Aaa and A), thus effectively giving some rating uplift compared to a generic benchmark assumed to be in the mid-point Baa range.

Moody's notes that certain funding arrangements may incorporate structural features designed to insulate the credit quality of the water utility from that of its wider corporate family, sponsors or sub-contractors. These features may be crucial for the rating of a regulated water utility to reflect exclusively its credit quality, assessed as described in this rating methodology. However, they do not enhance the water utility's stand-alone credit quality and therefore are not listed as a source of rating uplift.

(ii) Debt Structure and Liquidity Protection

Structural enhancements in this category address financial risks associated with liquidity, interest rate and refinancing risk. Typical arrangements include:

- Dedicated cash reserves to cover all costs for at least next 12 months under base case
- Timing reserves to cover future "lumpy" payments (e.g. maintenance)
- No material refinancing risk (e.g. benefits of amortising debt or restrictions on debt concentration)
- Covenanted hedging policies

The different arrangements may have more or less bearing in our assessment of how effective creditor protection in this category is, depending on the specific circumstances of the company. If we regard the overall

## Global Regulated Water Utilities

effectiveness of creditor protection for risks relating to debt structure and liquidity as very high, the rating would be raised by one notch.

We highlight that a fully amortising debt structure, typical of project financings and typically associated with adequate reserving and hedging arrangements, is generally regarded as necessary to achieve a score of "very high" in this category. However, we consider it very unlikely for a utility to adopt an amortising debt structure, given the ongoing capital investment programmes, which usually require constant additional funding. Refinancing risk thus tends to be a constant feature of regulated water utilities' financing structures.

(iii) Control Afforded to Creditors

Among the most typical structural features, financial covenants and security arrangements are included in this category, as they provide creditors with a degree of control over a company's financial and business decisions in downturns, which are not enjoyed in respect of a typical corporate issuer. Specific arrangements that we classify in this category include:

- Step-in rights and remedies to delay concession termination or insolvency (e.g. direct agreements, security and intercreditor agreements, warning system).
- Restrictions on payments and distribution lock-ups (e.g. if metrics deteriorate below minimum required parameters).
- Frequent and regular reports of creditors' technical advisers to sanction base case validity and compliance with contractual and financial obligations.

Again, if the overall effectiveness of arrangements in this category is scored as very high, a one-notch rating uplift is applied. As for the previous category, the whole package of structural enhancements is assessed to gauge the overall effectiveness. For example, independent validation of compliance with financial ratio covenants may be an important consideration for the purpose of assessing the effectiveness of such covenants.<sup>15</sup> Creditor step-in rights should be specifically permitted under the regulatory, licence or concession frameworks as well as the finance documents.

We give value to security arrangements – typically in respect of the shares in the regulated water company – only as one element, although generally a critical element, of a wider package of concessions designed to improve creditors' ability to detect early potential problems and rectify them if possible (in the first instance by retaining cash surpluses within the company), or, if remedial action is not possible or fails, to maximise recovery prospects. As normally security is not allowed or is not enforceable on the regulated or concession assets, a rating uplift is not generally achievable simply by the granting of security.

In conclusion, Moody's believes that structural enhancements can deliver up to three notches of uplift to the rating if they are very comprehensive and effective. In the regulated water utilities universe, actual rating uplift tends to range between one and two notches.

## Rating Methodology Assumptions and Limitations, and other Rating Considerations

The rating methodology grid incorporates a trade-off between simplicity that enhances transparency and greater complexity that would enable the grid to map more closely to actual ratings. The four rating factors in the grid do not constitute an exhaustive treatment of all considerations that are important for ratings of companies in the regulated water and wastewater sector. In addition, our ratings incorporate expectations for future performance, while the financial information that is used to illustrate the mapping in the grid is mainly historical. In some cases, our expectations for future performance may be informed by confidential information that we cannot publish. In other cases, we estimate future results based upon past performance, industry trends, competitor actions and other factors. In either case, predicting the future is subject to the risk of substantial inaccuracy.

<sup>15</sup> A test to assess the effectiveness of financial covenants, in terms of definition and threshold levels, that we often use is to run increasingly negative downside sensitivities and see (i) whether and when distribution lock-ups are activated, and (ii) whether trapped cash provides material support to the company's credit metrics at meaningful levels.

## Global Regulated Water Utilities

Although the rating factors described in this methodology cover the principal drivers of our rating analysis, the analytical process also includes a number of important considerations that are consistently examined for fundamental issuers in general. Such factors include liquidity, notching practices for debt subordination, management quality and corporate governance, legal and environmental matters, financial reporting and overall disclosure, as well as the extent of likely government support. These matters are dealt with by Moody's in the form of overriding rating methodologies and practices that are applied in accordance with general credit policy guidelines. In situations where a water utility's rating is materially influenced by any such factor so as to diverge from the rating resulting from the application of Moody's industry methodology, we explain the relevant rating factors in company-specific research.

## Regional Differences

### UK

Moody's currently rates nine of the ten water and sewerage companies (WaSCs) operating in England and Wales as well as four of the eleven water only companies (WoCs). The WoCs are generally smaller in size and provide only water services within the overall franchise area of the larger WaSCs, which also undertake sewerage services.

The average rating of the UK water sector based on the credit quality of the relevant corporate family is around A3-Baa1, with most of the debt rated at A3. This reflects regulatory constraints that may restrict the ability of companies to position themselves lower in the rating scale, but also the industry's fundamental characteristics.

Overall, Moody's regards the risk profile of the UK regulated water utilities as one of the lowest amongst all industry sectors rated. In particular, we consider the UK regulatory framework as one of the most transparent and well-established, thus determining the high predictability of cash flows for the sector.

Based on the low business risk characteristics that are inherent in the generally monopolistic water sector as a whole, but are further enhanced through the strong regulatory framework applied in England and Wales, the UK water companies can sustain a relatively high level of leverage and maintain an investment-grade profile.

The UK water sector has recently completed the regulatory review process to determine prices for the five-year period 2010-15. The final price determination, published in November 2009, includes challenging assumptions for the UK water companies. Whilst we believe that the price review is overall neutral for credit ratings in the sector, we expect that shareholder returns will decline. Dividend policies that do not reflect the realities of both the new price limits and the size of each company's capital investment programme may lead to downward rating pressure for individual companies.

Over the long term, the sector may face challenges from the possible introduction of competition to certain elements of the value chain. Several recommendations have been made, including the vertical separation of the activities of the companies and proposals for developing upstream competition. Moody's does not believe that the proposed changes will adversely affect the business risk profiles of the water companies over the medium term. Furthermore, we expect that certain segments of the industry, such as the infrastructure networks, will retain natural monopoly characteristics over the very long term.

### Rest of Western Europe

Unlike in the UK, water services in the rest of Western Europe remain largely in public hands. In particular, the water and wastewater infrastructure usually remains in the ownership of local or regional governments. The assets and/or their operations could be transferred to a government-related corporate entity, as is the case for Acquedotto Pugliese S.p.A., a regional water utility that is owned by the regional government of the Italian region of Puglia where the company operates. However, very few of these entities have accessed the debt capital markets to date.

In a number of cases, local or regional governments have outsourced the operations of their water and wastewater infrastructure to the private sector, mainly through short-term management contracts, e.g. in France. However, such pure asset operators are outside of the scope of this methodology. For example, major water contractors, such as Suez Environnement or Veolia Environnement are not covered in this methodology, given that their credit profile is subject to different assumptions due to the competitive element of their operations.



## Global Regulated Water Utilities

On the other hand, the methodology captures AGBAR of Spain, whose activities combine the operation of assets under short-to-medium-term contracts with long-term concessions and licensed operations.

***Central and Eastern Europe – Example: Slovakia***

Although Moody's views favourably the historically strong balance sheet structure and strong cash flow generation of water companies in Slovakia, our rating assessment includes a forward looking assumption of increasing leverage and consequent weakening of credit metrics due to anticipated sizable investment expenditures necessary to comply with EU directives. For example, the European Water Framework Directive 2000/60/EC stipulates that all towns or villages of 2,000 or more citizens will need to have sewage system coverage by 2015. Although these EU requirements represent an obligation of the Slovak Republic, designated government support or EU funding for water companies has not yet been specifically defined. Moody's notes that fulfilling these requirements will require significant investments, thereby increasing the risk of deterioration in the companies' financial profiles. Unless the future capital investment needs are partially accommodated by state or EU funds or supported by a more benign regulatory regime, the companies (including BVS) would need to raise significant external debt. Moody's views the companies' current debt capacity as sufficient to absorb such debt, but cautions that the level of the debt capacity might be significantly constrained in case the pressure to maintain low water and sewage tariffs further escalates, preventing companies from preserving their financial profiles.

***United States***

In the US, there are federal guidelines related to water quality but utilities are also subject to regulation at the state level for quality, service, and, importantly, rate-setting. Moody's views each state individually and considers the various factors that affect the utilities profitability including, the type of fixed- versus variable-rate design allowed, historically authorised ROEs, and the existence of riders or other mechanism's that permit recovery of operating and capital costs outside of a general rate case. Additionally, we analyse the strength of any regulatory ring-fencing provisions that could limit the level of financial leverage the utility can operate at or restrictions on upstream dividends to parent companies or shareholders.

***Latin America – Example: Brazil***

Ratings for Brazilian water utilities are constrained by the lack of a consolidated regulatory framework to ensure stable and predictable levels of income and cash flows supportive of its capital-intensive activities. Water and wastewater services in Brazil are subject to several laws at federal, state and municipal levels. In general, the companies operate at the state or municipal level, pursuant to long-term concession agreements with the various municipalities, which own the underlying concession assets. Concession contracts often lack provisions for tariff adjustments, so rates are set by the state government, leaving ample room for politically driven decisions. Such political interference has been a primary factor driving deterioration in operating margins in the sector. The concession contracts often have written provision clauses that entitle the company for the recovery of the assets' residual value at termination; however, because the municipalities lack sufficient financial resources to fund investments or to reimburse past investments themselves, the terminated concessions tend to be renewed.

## Global Regulated Water Utilities

### **Conclusion: Summary of the Grid-Indicated Rating Outcomes**

For the 23 regulated water companies scored in detail under the methodology (excluding Severn Trent Plc and United Utilities Plc as pure holding companies; as well as Korea Water Resources Corp.), the methodology grid-indicated ratings map to current assigned ratings (or BCAs where relevant) as follows (please see Appendix II for further details):

- 52% or 12 companies map to their assigned rating (or BCA where relevant)
- 44% or 10 companies have grid-indicated ratings that are within one alpha-numeric notches of their assigned ratings (or BCAs where relevant)
- 4% or 1 company has grid-indicated ratings that are within two alpha-numeric notches of their assigned ratings (or BCAs where relevant)

Overall, all of the grid-indicated rating outcomes are within two alpha-numeric notches of their assigned ratings (or BCAs where relevant) and 96% of the grid-indicated ratings are within one alpha-numeric notch of their assigned ratings (or BCAs where relevant). We note that some of the multi-notch differentials relate to issuers, whose ratings are notched for structural subordination, which is not reflected in the rating methodology grid.

Rating Methodology

Moody's Global Infrastructure Finance

Global Regulated Water Utilities

# Appendix I – Regulated Water Utilities Rating Grid

Rating Category	Aaa	Aa	A	Baa	Ba	B	Caa	Weighting
<b>Rating Factor 1 – Regulatory Environment &amp; Asset Ownership Model</b>								
<b>(a) Stability and Predictability of Regulatory Environment</b>	Regulation is independent, well established (>15 years of being predictable and stable) and transparent (published methodologies clearly define risk allocation between companies and customers and are consistently applied, with public or shared financial model)	Regulation is independent, reasonably well established (>10 years of being predictable and stable) and transparent (published methodologies clearly define risk allocation between companies and customers and are generally consistently applied)  Regulatory framework has been mostly predictable and stable in recent years and is supportive of utilities	Regulation is generally independent and developed (published methodologies set out principles of risk allocation between companies and customers and are based on established precedents in the same jurisdiction); and has above average predictability and reliability, although regulatory regime may be sometimes less supportive of utilities  Utility regulatory body may be a state commission or national, state, provincial or independent regulator	Regulatory framework is well developed, with evidence of some inconsistency or unpredictability in the framework's application  OR  Regulatory framework is relatively new and untested, but methodologies are based on established precedents and jurisdiction has history of independent and transparent regulation for other utility services  Regulatory Environment may sometimes be challenging or politically charged	Regulatory framework is defined but there is a high degree of inconsistency or unpredictability in its application; tariff setting is subject to negotiation and political interference; there has been a history of difficult or less supportive regulatory decisions; some precedents in the country of predictable regulation for other utility services	Regulatory framework is unclear, untested or undergoing significant change, with a history of political interference  Utility regulatory body lacks a consistent track record and appears unsupportive, uncertain or highly unpredictable	Regulatory framework is not defined, unpredictable or politically driven	15.00%
<b>(b) Asset Ownership Model</b>	All key water and/or sewerage assets held outright in perpetuity	All key water and/or sewerage assets held outright under licence which can be terminated for underperformance, failure to meet certain financial parameters or insolvency  OR  held under long-term concession with clearly defined right to timely recovery of residual asset	All key water and/or sewerage assets held under long-term concession with clearly defined right to recover value of residual assets at termination/end of concession underpinned by highly rated entity but with undefined timeframe  OR  held under medium-/long-term operating leases or mgmt	All key water and/or sewerage assets held under long-term concession with entitlement to recover value of residual assets at termination/end of concession but procedures untested/undefined  OR  held under medium-/long-term operating leases or mgmt	All key water and/or sewerage assets held under concession with recovery of residual asset value at termination/end of concession subject to negotiation  OR  held under short-term operating leases or mgmt contract with good degree of portfolio diversification and renewal	All key water and/or sewerage assets held under concession with no recovery of residual asset value at termination/end of concession  OR  held under short-term operating leases or mgmt contract (limited portfolio diversification)  Expropriation	Issuer is in default under its licence, concession or lease/contract, likely to lead to termination  Expropriation highly likely, no prospect of compensation	10.00%

Rating Methodology

Moody's Global Infrastructure Finance

Global Regulated Water Utilities

Rating Category	Aaa	Aa	A	Baa	Ba	B	Caa	Weighting
		value at termination/end of concession underpinned by highly rated entity; clear track record of consistently applying concession termination / recovery regime	long-term operating leases or mgmt contract with very substantial portfolio diversification, very established market position and very high renewal rate (>95%)	contract with substantial portfolio diversification, established market position and high renewal rate (>90%)	rate (>80%) Expropriation possible, but some prospect of compensation	likely, little or no prospect of compensation		
(c) Cost and Investment Recovery (Ability & Timeliness)	No regulatory or contractual impediment to adjust tariffs (no approval or reviews required)	Tariff formula allows for timely recovery of operating expenditure including depreciation and a fair return on all investment  Depreciation allowance fairly reflects asset consumption  All capital expenditure is included in asset base as incurred or fully covered by specific riders/surcharges prior to the next rate case  Minimal challenges by regulators to companies' cost assumptions	Tariff formula allows for recovery of operating expenditure including depreciation based on allowances set at frequent price reviews (5-yearly intervals or shorter) and a fair return on all efficient investment  Depreciation allowance fairly reflects asset consumption  Capital expenditure is included in asset base as incurred or partially covered by specific riders/surcharges prior to the next rate case  Opex and capex can be subject to efficiency tests  Limited instances of regulatory challenges; limited delays to rate or tariff increases or cost recovery	Tariff formula allows for recovery of operating expenditure including depreciation and return on investment but subject to retrospective regulatory approval or infrequent price reviews (> 5-yearly intervals)  Some instances of revenue back-loading (e.g. depreciation allowance set below asset consumption or operating expenditure is capitalised)  OR  Rate/tariff reviews and cost recovery outcomes are usually predictable, although application of tariff formula may be unclear; potentially greater tendency for regulatory intervention and/or to disallow or delay costs	Tariff formula does not take into account all cost components and depreciation is set below asset consumption  Revenues allow coverage of most operating expenditure  But investment is not clearly or fairly remunerated  OR  Rate/tariff reviews are inconsistent, with some history of unwillingness to make timely rate changes	Tariff formula does not take into account all cost components and depreciation is set below asset consumption  Revenues only cover cash operating expenditure  OR  Highly uncertain rate reviews and cost recovery outcomes; regulators may engage in second guessing or spending decisions or deny rate increases to fund ongoing operations	Revenues only partially cover cash operating costs	12.00%

## Rating Methodology

## Moody's Global Infrastructure Finance

## Global Regulated Water Utilities

Rating category	Aaa	Aa	A	Baa	Ba	B	Caa	Weighting
<b>(d) Revenue Risk</b>	No exposure to volume or customer concentration risk	Little exposure to volume risk and/or timely recovery mechanism  Little concentration of volumes and revenues to one particular customer	Some exposure to volume risk but recovery mechanism with some delay through regulatory price review; generally limited volatility expected  Some concentration of volumes and revenues to one particular customer	Moderate exposure to volume risk but recovery mechanism with some delay through regulatory price review; moderate volatility expected  AND/OR Moderate concentration of volumes and revenues to one particular customer and/or industry sector	Significant exposure to volume risk but recovery mechanism, which may not follow regular intervals; significant volatility expected  OR Significant concentration of volumes and revenues to one particular customer and/or industry sector	High exposure to volume risk with no clear recovery mechanism  OR High concentration of volumes and revenues to one particular customer and/or industry sector	Very high exposure to volume risk with no existing recovery mechanism  OR Very high concentration of volumes and revenues to one particular customer and/or industry sector	3.00%

## Rating Factor 2 – Operational Characteristics &amp; Asset Risk

<b>(a) Operational Efficiency</b>	Consistently achieves maximum results on all relevant performance measures (both cost efficiency and service levels)	Track record of very high performance (consistently at the efficiency frontier and in the top 10% on relevant key performance measures)	Consistent track record of outperforming regulatory opex and capex targets; above national average on relevant key performance measures	Performance in line with national average; no history of material opex and/or capex overruns	Some history of material opex and/or capex overruns; below national average on relevant key performance measures	Currently experiencing serious capex and/or opex overruns; poor track record on relevant key performance measures	Very serious cost overruns or service failures could put issuer in default under its licence, concession or lease/contract	5.00%
<b>(b) Scale and Complexity of Capital Programme &amp; Asset Condition Risk</b>	Annual total capital expenditure (maintenance & enhancement) $\leq 4\%$ of total fixed assets or regulated asset base  AND/OR No asset condition risk (i.e. full and immediate cost pass-through)	Annual total capital expenditure (maintenance & enhancement) $> 4\% \leq 6\%$ of total fixed assets or regulated asset base  AND/OR Well-developed asset base under tight regulatory supervision; asset performance is generally stable or improving	Annual total capital expenditure (maintenance & enhancement) $> 6\% \leq 8\%$ of total fixed assets or regulated asset base  AND/OR Well-developed asset base and no history of serious asset failure; asset performance is generally stable or improving	Annual total capital expenditure (maintenance & enhancement) $> 8\% \leq 12\%$ of total fixed assets or regulated asset base  AND/OR Company has a reasonably developed asset base; may have some precedents of serious asset failures but asset performance is now broadly stable	Annual total capital expenditure (maintenance & enhancement) $> 12\% \leq 20\%$ of total fixed assets or regulated asset base  OR Small number of large and complex projects accounts for majority of capital programme  AND/OR Asset base not fully developed; average asset performance is gradually deteriorating or there is some uncertainty about asset condition	Annual total capital expenditure (maintenance & enhancement) $> 20\% \leq 30\%$ of total fixed assets or regulated asset base  OR One large and complex project accounts for majority of capital programme  AND/OR Performance of most assets is materially deteriorating, with serious assets failures likely or ongoing	Annual total capital expenditure (maintenance & enhancement) $> 30\%$ of total fixed assets or regulated asset base  OR Capital programme includes one or more large projects of extreme technical complexity  AND/OR Rapidly deteriorating asset performance or condition could put issuer in default under licence, concession or lease/contract likely to lead to termination	5.00%

## Rating Methodology

## Moody's Global Infrastructure Finance

## Global Regulated Water Utilities

Rating Category	Aaa	Aa	A	Baa	Ba	B	Caa	Weighting
<b>Rating Factor 3 – Stability of Business Model &amp; Financial Structure</b>								
(a) Ability and Willingness to Pursue Opportunistic Corporate Activity (M&A, Disposals & Investments)	Covenants prohibit all corporate activity OR Corporate activity is outside of management mandate	Covenants or licence/concession largely limit corporate activity, with exception of certain defined permitted investments	Strong track record of no material corporate activity and stated intention to refrain from M&A and major investments	Moderate, may impact credit metrics for 18-24 months only	Track record of repetitive, sizeable transactions	Highly likely to conduct frequent and very large opportunistic investments		3.33%
(b) Ability and Willingness to Increase Leverage	No additional indebtedness allowed without debt holders' consent	Additional indebtedness only allowed for capex under debt covenants and/or licence/concession terms	Financial covenants in principal debt instruments limit management ability to materially increase leverage	Conservative financial strategy, unlikely to compromise minimum financial parameters	Limited track record of consistent financial policies; likely to target high leverage	Track record of aggressive financial policies and very high leverage; likely to pay out creditors' financial cushion ahead of business pressures		3.33%
(c) Targeted Proportion of Operating Profit outside Core Water and Wastewater Activities	0% (=exclusive focus on core water and wastewater services) OR Covenants prohibit all other businesses	0-5% OR Covenants largely limit non-concession businesses, with exception of certain defined and low risk permitted businesses	5-10%	10-15%	15-20%	>20%		3.33%
<b>Factor 4: Key Credit Metrics</b>								
(a) Adjusted Interest Cover OR FFO Interest Cover	>8.0x OR >10.0x	4.5-8.0x OR 7.0-10.0x	2.5-4.5x OR 4.5-7.0x	1.5-2.5x OR 2.5-4.5x	1.2-1.5x OR 1.8-2.5x	1.0-1.2x OR 1.5-1.8x	<1.0x OR <1.5x	15.00%
(b) Net Debt / Regulated Asset Base (or Fixed Assets) OR Debt/Cap	<25%	25-40%	40-55%	55-70%	70-85%	85-100%	>100%	15.00%
(c) FFO / Net Debt	>40%	25-40%	15-25%	10-15%	6-10%	4-6%	<4%	5.00%
(d) RCF / Capex	>3.5x	3.5-2.5x	1.5-2.5x	1.0-1.5x	0.5-1.0x	0.25-0.5x	<0.25x	5.00%

## Global Regulated Water Utilities

## Appendix II – Indicated Ratings and Results of Mapping

An issuer may score higher or lower for any given factor or sub-factor than its actual or indicated rating implies. This is not in itself a concern, but rather reflects the relative strength and weaknesses of each individual issuer in relation to each of the sub-factors. Indeed, there is a propensity for privately-owned regulated water utilities to utilise their debt service capacity and leverage on their strong business fundamentals to improve shareholder returns. Therefore, it would not be uncommon to see issuers scoring high for fundamental business risk factors and relatively low on the key credit metrics, to achieve a rating comfortably in the investment-grade category, i.e. around low single-A to high-Baa.

On the other hand, issuers in less developed markets may exhibit the reverse as a strong financial profile is required to offset the relative weakness of less transparent and established regulatory regimes.

The full results of the rating mapping and indicated ratings is summarised below. Certain UK issuers, which have been funded under a more structured approach, including credit-enhancing features, receive additional rating uplift, as shown below.

After the main summary table, we discuss individual mappings and outliers for each of the key rating factors separately.

Sub-Factor Weights	Factor 1			Factor 2			Factor 3			Factor 4		
	15.0%	10.0%	12.0%	3.0%	5.0%	5.0%	3.3%	3.3%	3.3%	15.0%	5.0%	5.0%
	Stability and Predictability of Regulatory Environment	Asset Ownership Model	Cost Investment Recovery	Revenue Risk	Operational Efficiency	Scale and Complexity of Capital Programme & Asset Condition Risk	Ability and Willingness to Pursue Opportunistic Corporate Activity	Ability and Willingness to Increase Leverage	Targeted Proportion of Operating Profit Outside Core Water and Wastewater Activities	Adjusted Interest Cover (or FFO Interest Cover)	Net Debt/ RAB (or Debt/ Cap)	RCF/ Debt/ Capex
<b>Europe</b>												
Acquedotto Pugliese S.p.A.	Baa3 [12]	Baa3	0	Baa3	Ba	Caa	A	A	Aa	Ba	B	Caa
Bratislavská vodárenská spoločnosť, a.s.	Baa2 [11]	Baa3	0	Ba	Ba	Ba	A	Ba	Aa	Aaa	Aaa	Ba
Sociedad General de Aguas de Barcelona, S.A. (AGBAR)	A2	A3	0	A	A	Baa	Baa	Baa	B	A	A	Ba
Anglian Water Services Limited	Baa1	Baa2	+1	Baa1	Baa	A	Aa	A	Aa	Ba	Ba	Ba
Dwr Cymru Cyfyngedig	A3	Baa1	0	Baa1	Baa	A	Aa	A	Aa	Baa	Ba	Ba
Northumbrian Water Limited	Baa1	Baa1	0	Baa1	Baa	Baa	A	Baa	Aa	Baa	Ba	Ba
Sewer Trent Water Limited	A3	A3	0	A3	Baa	A	A	Baa	Aa	Baa	A	Ba
Southern Water Services Limited	Baa1	Baa2	+1	Baa1	Baa	Baa	Aa	A	Aa	Ba	Ba	Ba
Thames Water Utilities Limited	Baa1	Baa2	+1	Baa1	Baa	Ba	Aa	A	Aa	Ba	Ba	B
United Utilities Water Plc	A3	A3	0	A3	Baa	Baa	A	Baa	Aa	Baa	A	Ba



## Global Regulated Water Utilities

## Sub-Factor Weights

Sub-Factor Weights	Factor 1			Factor 2		Factor 3		Factor 4				
	15.0%	10.0%	12.0%	3.0%	5.0%	3.3%	3.3%	3.3%	15.0%	5.0%	5.0%	
	Stability and Predictability of Regulatory Environment	Asset Ownership Model	Cost and Investment Recovery	Revenue Risk	Operational Efficiency	Scale and Complexity of Capital Program and Asset Condition Risk	Ability and Willingness to Pursue Opportunistic Corporate Activity	Ability and Willingness to Increase Leverage	Adjusted Interest Cover (or FFO Interest Cover)	Net Debt/ RAB (or Debt/ Cap)	FFO/ Debt	RCF/ Capex
Wessex Water Services Limited	Aaa	Aa	A	A	Baa	Baa	A	Baa	Baa	Baa	Baa	Ba
Yorkshire Water Services Limited	Aaa	Aa	A	A	A	A	Aa	A	Ba	Ba	Baa	Ba
South East Water Limited	Aaa	Aa	A	A	Baa	Baa	Aa	A	Ba	Ba	Ba	Ba
South Staffordshire Water Plc	Aaa	Aa	A	A	A	Ba	Aa	A	Ba	Ba	A	Ba
Sutton & East Surrey Water Plc	Aaa	Aa	A	Baa	Baa	Ba	Aa	A	Ba	Ba	A	Ba
Veolia Water Central Ltd (formerly Three Valleys Water)	Aaa	Aa	A	A	Baa	Ba	A	Baa	Ba	Baa	A	Ba
North America												
American Waterworks Company, Inc.	Baa	A	A	Aa	Baa	Baa	Baa	Baa	Baa	Baa	Baa	Ba
New Jersey American Water	A	Aa	A	A	Baa	Baa	A	A	A	A	A	Ba
Pennsylvania-American Water Company	A	Aa	Aa	A	Baa	Baa	A	A	Baa	A	A	Ba
Golden State Water Company	A	Aa	A	A	Baa	Baa	A	A	Baa	A	A	Ba
Pennichuck Water Works, Inc.	Baa	Aa	A	Baa	Baa	Baa	A	A	Baa	A	Baa	B
United Waterworks, Inc.	Baa	A	A	A	Baa	A	Baa	Baa	Baa	A	Baa	B
Latin America												
Companhia de Saneamento do Parana - SANEPAR	B	Baa	B	Baa	Baa	Ba	Baa	Ba	Baa	A	A	Ba

Positive Outlier  
Negative Outlier



## Rating Methodology

## Moody's Global Infrastructure Finance

## Global Regulated Water Utilities

## Rating Factor #1 – Results of Mapping

## Factor 1 - Regulatory Environment and Asset Ownership Model

Sub-Factor Weights 15.00% 10.00% 12.00% 3.00%

Company	Current Rating	Outlook	Final Indicated Rating	Stability and Predictability of Regulatory Environment	Asset Ownership Model	Cost and Investment Recovery (Ability & Timeliness)	Revenue Risk
<b>Europe</b>							
Acquedotto Pugliese S.p.A.	Baa3 [12]	Negative	Ba3	Ba	Baa	Baa	Aa
Bratislavská vodárenská spoločnosť, a.s.	Baa2 [11]	Stable	Baa3	B	Aa	B	Ba
Sociedad General de Aguas de Barcelona, S.A. (AGBAR)	A2	UR-D	A3	A	A	Aa	A
Anglian Water Services Limited	Baa1	Stable	Baa1	Aaa	Aa	A	A
Dwr Cymru Cyfyngedig	A3	Stable	Baa1	Aaa	Aa	A	A
Northumbrian Water Limited	Baa1	Stable	Baa1	Aaa	Aa	A	A
Severn Trent Water Limited	A3	Stable	A3	Aaa	Aa	A	A
Southern Water Services Limited	Baa1	Stable	Baa1	Aaa	Aa	A	A
Thames Water Utilities Limited	Baa1	Stable	Baa1	Aaa	Aa	A	A
United Utilities Water Plc	A3	Stable	A3	Aaa	Aa	A	A
Wessex Water Services Limited	A3	Stable	A3	Aaa	Aa	A	A
Yorkshire Water Services Limited	Baa1	Stable	A3	Aaa	Aa	A	A
South East Water Limited	Baa2	Stable	Baa2	Aaa	Aa	A	A
South Staffordshire Water Plc	Baa2	Stable	Baa2	Aaa	Aa	A	A
Sutton & East Surrey Water Plc	Baa1	Stable	Baa1	Aaa	Aa	A	Baa
Veolia Water Central Ltd (formerly Three Valleys Water)	A3	Negative	Baa1	Aaa	Aa	A	A
<b>North America</b>							
American Waterworks Company, Inc.	Baa2	Stable	Baa2	Baa	A	A	Aa
New Jersey American Water	Baa1	Stable	A3	A	Aa	A	A
Pennsylvania-American Water Company	Baa1	Stable	A3	A	Aa	Aa	A
Golden State Water Company	A2	Stable	A3	A	Aa	A	A
Pennichuck Water Works, Inc.	Baa3	Stable	Baa1	Baa	Aa	A	Baa
United Waterworks, Inc.	Baa1	Negative	Baa1	Baa	A	A	A
<b>Latin America</b>							
Companhia de Saneamento do Parana - SANEPAR	Ba3 [13]	Negative	Ba2	B	Baa	B	Baa

Positive Outlier

Negative Outlier

## Observations &amp; outliers:

Given the fundamentally low business risk of the regulated water sector, it is not surprising that most issuers score strongly on this factor. Most notably are the UK water companies as positive outliers reflecting the transparent, stable and predictable nature of the regulatory framework applied, which is seen as benchmark for the global regulated water sector.

## Rating Methodology

## Moody's Global Infrastructure Finance

## Global Regulated Water Utilities

## Rating Factor #2 – Results of Mapping

## Factor 2 – Operational Characteristics &amp; Asset Risk

Sub-Factor Weights

5.00%

5.00%

Company	Current Rating	Outlook	Final Indicated Rating	Operational Efficiency	Scale & Complexity of Capital Programme & Asset Condition Risk
<b>Europe</b>					
Acquedotto Pugliese S.p.A.	Baa3 [12]	Negative	Ba3	Ba	Caa
Bratislavská vodarenska spoločnosť, a.s.	Baa2 [11]	Stable	Baa3	Ba	Ba
Sociedad General de Aguas de Barcelona, S.A. (AGBAR)	A2	UR-D	A3	A	Baa
Anglian Water Services Limited	Baa1	Stable	Baa1	Baa	A
Dwr Cymru Cyfyngedig	A3	Stable	Baa1	Baa	A
Northumbrian Water Limited	Baa1	Stable	Baa1	Baa	Baa
Severn Trent Water Limited	A3	Stable	A3	Baa	A
Southern Water Services Limited	Baa1	Stable	Baa1	Baa	Baa
Thames Water Utilities Limited	Baa1	Stable	Baa1	Baa	Ba
United Utilities Water Plc	A3	Stable	A3	Baa	Baa
Wessex Water Services Limited	A3	Stable	A3	Baa	Baa
Yorkshire Water Services Limited	Baa1	Stable	A3	A	A
South East Water Limited	Baa2	Stable	Baa2	Baa	Baa
South Staffordshire Water Plc	Baa2	Stable	Baa2	A	Ba
Sutton & East Surrey Water Plc	Baa1	Stable	Baa1	Baa	Ba
Veolia Water Central Ltd (formerly Three Valleys Water)	A3	Negative	Baa1	Baa	Ba
<b>North America</b>					
American Waterworks Company, Inc.	Baa2	Stable	Baa2	Baa	Baa
New Jersey American Water	Baa1	Stable	A3	Baa	Baa
Pennsylvania-American Water Company	Baa1	Stable	A3	Baa	Baa
Golden State Water Company	A2	Stable	A3	Baa	Baa
Pennichuck Water Works, Inc.	Baa3	Stable	Baa1	Baa	Baa
United Waterworks, Inc.	Baa1	Negative	Baa1	Baa	A
<b>Latin America</b>					
Companhia de Saneamento do Parana - SANEPAR	Ba3 [13]	Negative	Ba2	Baa	Ba

Positive Outlier

Negative Outlier

**Observations & outliers:**

There are a few negative outliers on the sub-factor that relates to the scale and complexity of the capital programme, reflecting comparably large investment programmes planned over the medium term.



## Global Regulated Water Utilities

## Rating Factor # 3 – Results of Mapping

## Factor 3 – Stability of Business Model &amp; Financial Structure

Sub-Factor Weights

3.33%

3.33%

3.33%

Company	Current Rating	Outlook	Final Indicated Rating	Ability and Willingness to Pursue Opportunistic Corporate Activity (M&A, Disposals & Investments)	Ability and Willingness to Increase Leverage	Targeted Proportion of Operating Profit Outside Core Water and Waste-water Activities
<b>Europe</b>						
Acquedotto Pugliese S.p.A.	Baa3 [12]	Negative	Ba3	A	A	Aa
Bratislavská vodarenska spoločnosť, a.s.	Baa2 [11]	Stable	Baa3	A	Ba	Aa
Sociedad General de Aguas de Barcelona, S.A. (AGBAR)	A2	UR-D	A3	Baa	Baa	B
Anglian Water Services Limited	Baa1	Stable	Baa1	Aa	A	Aa
Dwr Cymru Cyfyngedig	A3	Stable	Baa1	Aa	A	Aa
Northumbrian Water Limited	Baa1	Stable	Baa1	A	Baa	Aa
Severn Trent Water Limited	A3	Stable	A3	A	Baa	Aa
Southern Water Services Limited	Baa1	Stable	Baa1	Aa	A	Aa
Thames Water Utilities Limited	Baa1	Stable	Baa1	Aa	A	Aa
United Utilities Water Plc	A3	Stable	A3	A	Baa	Aa
Wessex Water Services Limited	A3	Stable	A3	A	Baa	Aa
Yorkshire Water Services Limited	Baa1	Stable	A3	Aa	A	Aa
South East Water Limited	Baa2	Stable	Baa2	Aa	A	Aa
South Staffordshire Water Plc	Baa2	Stable	Baa2	Aa	A	Aa
Sutton & East Surrey Water Plc	Baa1	Stable	Baa1	Aa	A	Aa
Veolia Water Central Ltd (formerly Three Valleys Water)	A3	Negative	Baa1	A	Baa	Aa
<b>North America</b>						
American Waterworks Company, Inc.	Baa2	Stable	Baa2	Baa	Baa	Baa
New Jersey American Water	Baa1	Stable	A3	A	A	Aa
Pennsylvania-American Water Company	Baa1	Stable	A3	A	A	Aa
Golden State Water Company	A2	Stable	A3	A	A	Aa
Pennichuck Water Works, Inc.	Baa3	Stable	Baa1	A	A	Aa
United Waterworks, Inc.	Baa1	Negative	Baa1	Baa	Baa	Aa
<b>Latin America</b>						
Companhia de Saneamento do Parana - SANEPAR	Ba3 [13]	Negative	Ba2	Baa	Ba	Aa

Positive Outlier

Negative Outlier

## Observations &amp; outliers:

There are a number of positive outliers on this factor, mostly reflecting restrictive licence conditions or additional contractual arrangements that limit a regulated water utility's activity and ensure that it maintains focus on the core regulated activities.

Negative outliers usually relate to utilities that have other activities in addition to the core regulated business. AGBAR, for example, currently still operates a health insurance and hospital management business, although it is in the process of selling it. Upon completion of such sale, the company's score under the sub-factor for targeted proportion of operating profit outside of core activities would likely improve significantly, unless it embarks on activities other than the regulated water and waste water business.



## Rating Methodology

## Moody's Global Infrastructure Finance

## Global Regulated Water Utilities

## Rating Factor # 4 – Results of Mapping

## Factor 4 – Key Credit Metrics

Sub-Factor Weights				15.00%	15.00%	5.00%	5.00%
Company	Current Rating	Outlook	Final Indicated Rating	Adjusted Interest Coverage (FFO Interest Coverage)	Net Debt/RAB (or Debt/Cap)	FFO/Net Debt	RCF/Capex
<b>Europe</b>							
Acquedotto Pugliese S.p.A.	Baa3 [12]	Negative	Ba3	Ba	B	Ba	Caa
Bratislavská vodarenska spoločnosť, a.s.	Baa2 [11]	Stable	Baa3	Aaa	Aaa	Aaa	Ba
Sociedad General de Aguas de Barcelona, S.A. (AGBAR)	A2	UR-D	A3	A	A	Aa	Ba
Anglian Water Services Limited	Baa1	Stable	Baa1	Ba	Ba	Ba	Ba
Dwr Cymru Cyfyngedig	A3	Stable	Baa1	Baa	Ba	Baa	Ba
Northumbrian Water Limited	Baa1	Stable	Baa1	Baa	Ba	Baa	Ba
Severn Trent Water Limited	A3	Stable	A3	Baa	Baa	A	Ba
Southern Water Services Limited	Baa1	Stable	Baa1	Ba	Ba	Baa	Ba
Thames Water Utilities Limited	Baa1	Stable	Baa1	Ba	Ba	A	B
United Utilities Water Plc	A3	Stable	A3	Baa	Baa	A	Ba
Wessex Water Services Limited	A3	Stable	A3	Baa	Baa	Baa	Ba
Yorkshire Water Services Limited	Baa1	Stable	A3	Ba	Ba	Baa	Ba
South East Water Limited	Baa2	Stable	Baa2	Ba	Ba	Ba	Ba
South Staffordshire Water Plc	Baa2	Stable	Baa2	Ba	Ba	A	Ba
Sutton & East Surrey Water Plc	Baa1	Stable	Baa1	Ba	Ba	A	Ba
Veolia Water Central Ltd (formerly Three Valleys Water)	A3	Negative	Baa1	Ba	Baa	A	Ba
<b>North America</b>							
American Waterworks Company, Inc.	Baa2	Stable	Baa2	Baa	Baa	Baa	Ba
New Jersey American Water	Baa1	Stable	A3	A	A	A	Ba
Pennsylvania-American Water Company	Baa1	Stable	A3	Baa	A	A	Ba
Golden State Water Company	A2	Stable	A3	Baa	A	A	Ba
Pennichuck Water Works, Inc.	Baa3	Stable	Baa1	Baa	A	Baa	B
United Waterworks, Inc.	Baa1	Negative	Baa1	Baa	A	Baa	B
<b>Latin America</b>							
Companhia de Saneamento do Parana - SANEPAR	Ba3 [13]	Negative	Ba2	Baa	A	A	Ba

Positive Outlier

Negative Outlier

## Observations &amp; outliers:

There are a number of negative outliers for this factor, reflecting the generally free cash flow negative nature of the industry. Furthermore, a number of issuers have fully utilised the debt capacity provided by the fundamentally low business risk characteristics of regulated water utilities. We note that for those issuers – particularly in the UK – that have executed financing transactions with credit-enhancing features, we have scored the relevant sub-factors (Adjusted Interest Coverage and Net Debt to RAB) in accordance with the cash lock-up triggers embedded in the funding structure. These companies are likely to exhibit a financial profile close to the financial covenants – whose breach would trigger a distribution lock-up – reflecting their generally large capex funding requirements as well as their shareholder structure, particularly the presence of infrastructure and other specialist funds.

Positive outliers under this factor essentially include issuers located in developing countries or other jurisdictions with weaker business fundamentals.

## Global Regulated Water Utilities

## Appendix III - Industry Overview

Generally, regulated water utilities exhibit significantly lower business risk than other rated corporate sectors, and are considered by Moody's as exhibiting one of the lowest business risk profile even among other infrastructure issuers.<sup>16</sup>

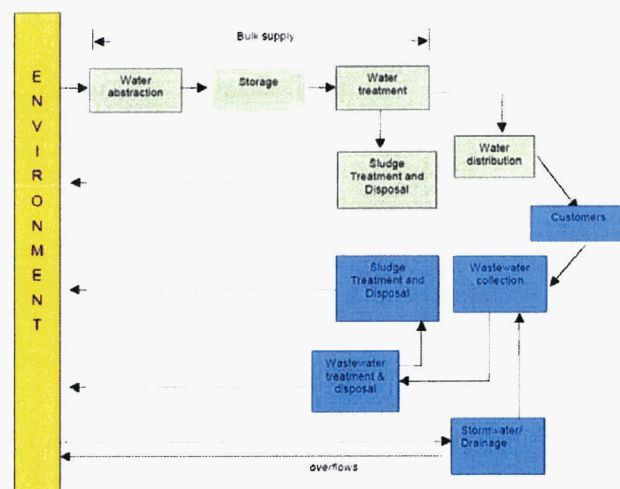
Under developed regulatory frameworks, the very low business risk primarily reflects:

- Monopoly-type activities, most commonly supported by long-term licence or concession agreements.
- Characteristically strong visibility in revenues and profit generation, due to (i) importance of water and wastewater services provided, which results in overall low demand volatility and general resilience to economic fluctuations, and (ii) clear and predictable mechanisms for tariff increases (embedded in the regulatory framework or concession regime), which will sustain revenues over the long term.
- Strong regulatory supervision due to the critical element of health and environmental implications of the water and wastewater services.

The high and sustainable levels of cash flows afforded by these characteristics can also translate into a significant capacity to sustain high debt levels over the long term. This is of particular importance as the sector as a whole has massive infrastructure funding needs to enhance the existing facilities to improve health and environmental standards. Due to the significant investment requirements issuers will need constant access to external funding as the vast amount of investments cannot be solely covered from internal cash flow generation. Although customer bills continue to rise to cover for the additional costs in financing the water and wastewater infrastructure (partly offset by efficiency savings in the operations), the industry also remains heavily subsidised.<sup>17</sup>

The graph below shows the main components of the water and wastewater value chain that form part of the overall services provision.

## Value Chain of Water and Wastewater Services



Source: Study on the Application of the Competition Rules to the Water Sector in the European Community, Dec 2002, prepared by WRc and Economic for the European Commission

<sup>16</sup> Please see Moody's Special Comment: "Regulated Industries – Q&A on Lending against the Regulated Asset Value", published in November 2007.

<sup>17</sup> Levels and forms of subsidies differ from jurisdiction to jurisdiction. Most countries provide some form of cross subsidisation between customers through the application of average tariffs across any given water supply area compared to the actual cost of delivery to each respective customer. Furthermore, there are a number of explicit or implicit measures by which governments provide subsidies, such as reduced trade taxes for utilities, or income support and/or targeted assistance for customers in need. Subsidies can also be built directly into the tariff system. For example, when the UK water companies (in England and Wales) were privatised, the value of the regulated asset base was set at the amount achieved through privatisation. The privatisation value, however, was significantly lower than the replacement cost of the regulated assets, as it reflected the historically low charges paid by customers for the water and wastewater services. Given that the companies need to incur large amounts of maintenance capex, which has to be spent at the replacement value, the tariffs include a maintenance capex allowance to reflect such higher replacement values, but the return that companies earn is based on the lower regulated asset base. This ensured that customer prices did not rise as much as would otherwise have been the case.



## Global Regulated Water Utilities

The combination of water abstraction and treatment is also referred to bulk supply or wholesale activities. The vertical integration of the water supply chain can stop at this point. This is the case in a number of EU countries, where one large utility may be responsible for the water wholesale activities, whilst a number of smaller – usually municipal-owned – suppliers undertake the distribution to the end customers. Most of the water utilities rated by Moody's are integrated providers of water and/or wastewater services along the entire value chain, which in addition to the bulk supply consisting of water abstraction and treatment also includes the distribution and sale to customers. Among the Moody's rated universe, we only have one rated water wholesaler: Korea Water Resources Group, currently rated A2 with stable outlook.

This rating methodology is meant to cover not only utilities providing services along the value chain of water and wastewater treatment and disposal, but also addresses different business models adopted globally in managing the water and wastewater activities. In many countries around the world, the supply of water and treatment of wastewater are public services and the legal responsibility of municipalities. In these cases the legal ownership of the assets also lies with the municipalities. However, there exist a variety of operational models that are derived from this set-up.

First, the water and wastewater infrastructure assets can be operated under direct management by the municipality itself. In this case, the water and wastewater services would be part of the general regional or local administration. Such instances are not covered under this rating methodology.

Second, the management of the water and wastewater infrastructure can be delegated to another entity. Such entity can be – and in many instances is – partly or wholly owned by the regional or local government that retains the legal responsibility for the provision of water and wastewater services. Only a few countries worldwide have completely privatised the entire value chain of water and/or wastewater provision. The UK (more specifically England and Wales) is the most cited example of a country that has transferred the responsibility of water and wastewater services entirely to the private sector, albeit under stringent regulatory oversight.

With respect to delegated management, a variety of different forms of contracts, concessions or licence arrangements exists, which can be summarised into the following main business models:

**Management Contract:** This is usually a short-term (3-5 years) arrangement for the management of operational facilities. The assets remain in the public sector, usually with the relevant municipality, which also collects the user charges from the customers. The managing entity is remunerated by the municipality through payment of a management fee. Depending on the contract, it may include a number of performance targets against which the managing entity will be measured. Capital expenditure requirements and their funding remain principally the responsibility of the relevant municipality.

**Lease Contract:** A lease contract is similar to a management contract in that the asset ownership remains with the municipality. However, the relevant service undertaker, responsible for the operation of the assets will collect the user charges directly from the end customers, and may also be responsible for funding investments in the assets over the life of the contract. Lease contracts commonly apply over periods of 8-15 years.

**Concession Contract:** This is one of the most wide-ranging options in transferring responsibility for the assets to the relevant service undertaker. Concession arrangements usually cover a period of 25-30 years and transfer the economic benefits and costs of asset ownership to the service undertaker for the time of the concession. The service undertaker therefore also obtains responsibility for capital investments and funding requirements. The terms of the concession are negotiated on a bilateral basis, but may be based on a general legislative and/or regulatory framework applied throughout a jurisdiction. Given the length of the contract, a concession also generally includes tariff reviews at specified intervals. In Europe, concessions contracts are commonly used for water and wastewater operation in France, Italy and Spain. They can also be used in Latin America, e.g. in Brazil.

**Licence:** The licence approach is usually very similar to a long-term concession. However, the terms of the licence are usually set in law and are commonly applied to all licensed undertakers. Licences may have maturities similar to long-term concession or run in perpetuity, with an option to terminate the for severe performance failures. For example, licences apply for the UK water companies operating in England and Wales; for these companies the licences include a condition that allows licence termination subject to a 25 year notice period.

## Global Regulated Water Utilities

Furthermore, for single asset transactions or projects, a number of specific arrangements can be applied, such as Design, Build, Operate (DBO); Build, Own, Operate (BOO); or Build, Operate, Transfer (BOT). These contractual arrangements are generally used in cases of large investment requirements for a specific asset, which can be transferred to the private sector, for example through project finance arrangements. Such contracts are commonly restricted to one particular asset, such as the construction and operation of a treatment work, and can have similar terms as concessions. Contractors that solely operate under this kind of contract arrangement are not covered by this rating methodology.

Generally, all contracts and concessions are initially put out to competitive tender, and will usually require re-tendering at their expiry.

This rating methodology is intended to capture only issuers that for the time horizon of the licence and/or concession or contract are entitled to the exploitation rights of the relevant water and wastewater assets. In many cases, this may not apply to management contracts or lease arrangements. Pure asset operators, whose activities comprise solely of managing and servicing the assets are not captured by this rating methodology.

Asset managers or service providers are subject to different market dynamics, which are highlighted below; therefore, our credit assessment would take into account different rating factors.

- Shorter contract periods under the typical asset operator arrangement increase competitive pressures due to more frequent re-tendering, compared to monopoly or quasi-monopoly operations of an asset owner or a long-term concessionaire.
- Bilateral contracts for asset operation are often negotiated on a case-by-case basis, and may be subject to unilateral amendments. Conversely, long-term asset ownership/concession arrangements follow a more common framework that is based on legislation or jurisdiction-wide regulation that leaves less scope for individual negotiation.
- Tariff adjustments may be less frequent under the asset operator model, whereas the asset ownership arrangements usually require detailed definition of the tariff formula as well as the potential events that will allow the utility to re-set tariffs.
- Asset operation typically involves higher operational leverage and lower margins, leaving an operator's profitability more vulnerable to operational cost shocks. On the other hand, asset ownership embodies execution and funding risks in relation to generally sizeable capital investment requirements.

## Global Regulated Water Utilities

**Appendix IV – Rating Issues Over the Next Decade**

The main rating issues faced by regulated water companies are as follows:

- **Political and Regulatory Risk:** Moody's notes that given the importance of water and wastewater services, the level of political interference is generally higher than for other infrastructure sectors. This is underpinned by the fact that in most jurisdictions the provision of these services remains in public ownership and/or under government control. Tariff settings can be politically driven, creating the risk, particularly in emerging markets, that the set tariffs may be insufficient to upgrade or maintain the asset base. Affordability of tariffs is therefore more important for the assessment of a water company's credit quality than it is in other infrastructure sectors. Recent regulatory reviews were completed in the UK (for water companies in England and Wales), where the final price determination for water tariffs applicable over the five-year period 2010-15 (AMP5) were published in November 2009. Moody's notes that regular price reviews under a transparent and established framework are generally ratings neutral, but cautions that regulatory frameworks tend to undergo a continuous evolution. However, regulators in jurisdictions with high institutional strength are usually required to ensure that efficient companies remain financeable. On the other hand, regulatory risk is higher where the framework remains relatively new and untested or the rule of law and the relevant institutions in a given jurisdiction are less robust, which tends to be case primarily in emerging markets.
- **Large Capital Expenditures:** Water companies, in general, face large capital investment programmes to upgrade and expand their infrastructure and treatment works to the latest environmental standards and regulation applicable. In addition, many water utilities, for example in the UK, face significant maintenance requirements of an aging network. Despite current unsettled economic and, at times, financial market conditions, Moody's believes that it is unlikely that such investments will be delayed as, in most developed regulatory regimes, investments are driven by regulatory requirements to ensure a stable and reliable provision of quality water and wastewater services. Furthermore, regulated water companies in the developed world tend to earn a fair return – generally with limited or no linkage to demand volume – on new and replacement investments, which ensures that efficient companies can continue to finance their functions.
- **Funding:** As a result of the large capital programmes, as explained above, most regulated water utilities rated by Moody's experience negative free cash flows that are covered by additional debt funding. Whilst regulated water companies have so far demonstrated relatively good access to debt markets even in difficult market conditions, they may face a mismatch (to their detriment) between the pricing of funding and the return they earn on their asset base.
- **Increasing Leverage:** Over the last decade, leverage among the rated water utilities has increased significantly. This development (most visible in the UK) largely reflects shareholders' desire to maximise returns, as well as regulatory constraints that restrict the ability of companies to position themselves lower in the rating scale together with the nature of the industry and the way in which it is regulated. As low risk but highly capital intensive businesses, water companies have sought to optimise their capital structures by balancing the attractions of high leverage in the benign debt markets of recent years with the need to preserve solid investment-grade ratings to retain good access to the range of debt funding available to infrastructure issuers. As part of this development, regulated water companies that have been acquired in the last few years have generally been leveraged materially to re-finance acquisition debt. This trend increases event risk for lower leveraged entities to follow suit.
- **Low Inflation/Deflation:** A number of regulatory models across the world (a prime example being the UK) are designed in real terms (as opposed to nominal terms), where allowed revenues are computed in real terms and subsequently inflated by the Retail Price Index or Consumer Price Index. This is aimed at improving the allocation of the cost of the services across different generations of customers and thereby also providing some protection against cost inflation. However, Moody's notes that water utilities governed by this type of regulatory model generally need to raise a material, if not predominant portion of their debt on a conventional basis (i.e. debt instruments whose coupon is based on nominal interest rates). This may cause a timing mismatch of cash flows and debt service, as well as a potentially higher reliance on continued market access to raise debt. Furthermore, given their often aggressive dividend policy and



## Global Regulated Water Utilities

tendency to maintain leverage (measured in relation to the regulated asset base) at constant levels close to the guidelines supporting their rating category, lower-than-expected inflation or deflation could lead certain companies to breach such parameters. Nevertheless, Moody's would expect managements to take actions (e.g. in the form of temporary reduction in shareholder distributions) to ensure that such breaches, if any, are of a temporary nature only.<sup>18</sup>

<sup>18</sup> For further discussion on this topic, see our Special Comment: "UK Water Sector: Stable Outlook, But Sustained Deflation Could Cause Negative rating Pressure", June 2009.

## Global Regulated Water Utilities

### Moody's Related Research

#### Industry Outlook

- UK Water Sector, December 2009 (119973)

#### Special Comment

- UK Water Sector: Key Ratios Used by Moody's in Assessing Companies' Credit Strength, March 2006 (97010)
- UK Water Sector: Q&A on Moody's Approach to New Structured Financings, October 2006 (100343)
- UK Regulated Industries: Q&A on Lending against the Regulated Asset Value, November 2007 (105954)
- UK Water Sector: Moody's Comments on Ofwat's Proposal to Introduce Menu Regulation, March 2008 (108091)
- UK Water Sector: Moody's Comments on Competition Review, December 2008 (113036)
- UK Water Sector: Stable Outlook, But Sustained Deflation Could Cause Negative Rating Pressure, May 2009 (117451)
- UK Water Sector: Moody's Comments on Companies' Final Business Plans, June 2009 (118183)
- UK Water Sector: Moody's Comments on Draft Determination, September 2009 (120015)

#### Rating Methodologies

- The UK Water Sector: Moody's Approach to Rating Highly-Leveraged Structures for Asset Ownership, February 2001 (64166)
- The UK Water Sector: Financial Parameters and Structural Enhancements for Leveraged Financings, July 2002 (75507)

*To access any of these reports, click on the entry above. Note that these references are current as of the date of publication of this report and that more recent reports may be available. All research may not be available to all clients.*

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July 10, 2009

**Industry Report Card:**

# U.S. Investor-Owned Water Utilities Successfully Navigate Turbulent Financial Markets

**Primary Credit Analyst:**

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## Table Of Contents

---

Reduced Capital Spending Plans Should Ease Pressure On Leverage

Access To Equity Is Improving, And Liquidity Remains Above Average

Ongoing Regulatory Support Is Likely, As Are Requests For Higher Rates

Analyzing The Ratings

Issuer Review

Rating Activity

Selected Articles

Contact Information

[www.standardandpoors.com/ratingsdirect](http://www.standardandpoors.com/ratingsdirect)

1

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## Industry Report Card:

# U.S. Investor-Owned Water Utilities Successfully Navigate Turbulent Financial Markets

In terms of credit quality, investor-owned water utilities make up one of the most stable and highly rated sectors in the U.S. During the first six months of 2009, Standard & Poor's Ratings Services did not take any rating actions or change the outlook on any rated water company, despite the turbulent economy. And we expect the water utilities' credit quality to retain that general stability throughout the remainder of 2009. The key trends we anticipate for the rest of the year include reductions in capital spending in response to the recession, continued access to debt markets coupled with improved access to the equity markets, and additional regulatory filings to address increased capital spending and higher operating costs.

## Reduced Capital Spending Plans Should Ease Pressure On Leverage

As we anticipated in the last report card, almost all the water utilities we rate have either slightly lowered or maintained their capital spending estimates for 2009. York Water Co. reduced its estimate for 2009 capital expenditures by almost a third of the original \$20 million. One major cause is a decline in customer growth and consumption, which we believe is closely related to the housing industry collapse and general economic weakness. Housing starts in 2009 are expected to be less than 50% of the annual historical rate, with only a moderate improvement from this level in 2010. Most water utilities reported a drop in per capita water consumption of between 2% and 5% in 2008 and the first quarter of 2009, thanks mostly to falling industrial consumption.

The reduction in capital spending shouldn't affect the water sector's long-term growth prospects. On the contrary, it will likely result in reduced stresses on leverage and lower external debt financing requirements. Given the water companies' negative free cash flow positions, we believe they are taking a discerning look at nondiscretionary capital projects, and that they will postpone or cancel the less critical ones or any that could experience a lag in recovery. We also expect the utilities to increasingly approach regulators for spending approval prior to commencing essential big-ticket capital projects.

We expect the industry will keep outspending cash flow over the next several years and that capital spending will gradually increase as the economy and housing improve. A U.S. Environmental Protection Agency (EPA) report published in February 2009 ("Drinking Water Infrastructure Needs Survey and Assessment") said the industry needs to spend a total of \$335 billion from 2007 through 2027, primarily to replace network infrastructure and comply with water quality standards. Of this amount, \$201 billion (60%) is for replacing or refurbishing deteriorating transmission and distribution pipes; \$75 billion (22%) is for building, expanding, and rehabilitating water treatment facilities; and \$37 billion (11%) is for storage tanks. The balance is for building or rehabilitating surface water intake structures, drilled wells, spring collectors, and other needs. The \$335 billion price tag does not include the significant water system needs for projects related primarily to population growth or collection of water in dams and reservoirs. That figure also does not include capital spending for wastewater applications, which the EPA's report, "Clean Watersheds Needs Survey 2004", released in January 2008 estimates at more than \$200 billion from 2004 to 2023.

*Industry Report Card: U.S. Investor-Owned Water Utilities Successfully Navigate Turbulent Financial Markets*

## **Access To Equity Is Improving, And Liquidity Remains Above Average**

Rated U.S. investor-owned water utilities continue to demonstrate above-average access to debt financing and maintain adequate liquidity. During the first half of 2009, a few companies expanded their bank line borrowing capacity, some issued long-term bonds, and two issued equity. The companies did all this despite difficult market conditions. Connecticut Water Service Group almost doubled its bank lines to \$40 million in May 2009. American Water Works Co. Inc. (AWW) and its subsidiaries issued more than \$450 million in 2009. And California Water Service Group issued \$100 million of first mortgage bonds.

Share issuances by AWW and American States Water show that access to equity is also improving. This provides a bit of comfort because some companies, notably York Water and Middlesex Water Co., postponed equity issuances planned for late 2008. We expect York and Middlesex to complete small issuances in 2009 or 2010.

At less than \$100 million per issuance, capital market activity in the water sector is relatively small. Because of the relatively small dollar amount of these issuances, some utilities have chosen to raise capital through private placements, which may be completed relatively quickly and potentially at a lower total cost compared to a public offering. Others have used municipal conduits for tax-exempt issues. Borrowings of this type and access to low-cost funds under state revolving fund programs are likely to continue, especially for the smaller water utilities.

## **Ongoing Regulatory Support Is Likely, As Are Requests For Higher Rates**

Fair and timely regulatory support remains one of the most important rating factors for a water utility's credit quality, and we expect rate case activity to maintain the high levels of the past two years. Allowed return on equity (ROE), which is one of the key factors when we evaluate regulation as part of a rating, was positive in most rate case decisions in 2009. In our view, that reflects the current increased cost of capital. The Pennsylvania Public Utility Commission has approved an ROE of 11% for York Water and Pennsylvania-American Water Co. The New Jersey Board of Public Utilities granted an allowed ROE of 10.3% for Middlesex Water, an improvement over the 10% or lower ROE previously granted in the state.

Falling pension asset values are another problem for water utilities. We expect the water utilities to request rate increases for the expected level of pension contributions. We also expect several companies to request enhanced rate-making mechanisms, such as decoupling. The separation of commodity throughput and financial health of the utility should support earnings and cash flow stability.

We expect states that already have decoupling measures for regulated gas and electricity distribution companies to extend these mechanisms to water utilities. We also expect commissions to grant infrastructure cost recovery mechanisms, under which companies recover capital investments outside of traditional rate cases. Such mechanisms currently exist in California, Connecticut, Delaware, Illinois, Indiana, Missouri, New York, Ohio, and Pennsylvania. In addition, utilities in other states have included infrastructure cost recovery mechanisms in pending rate cases. Standard & Poor's views these measures as positive for credit quality because they bring additional stability to cash flows.

*Industry Report Card: U.S. Investor-Owned Water Utilities Successfully Navigate Turbulent Financial Markets*

## Analyzing The Ratings

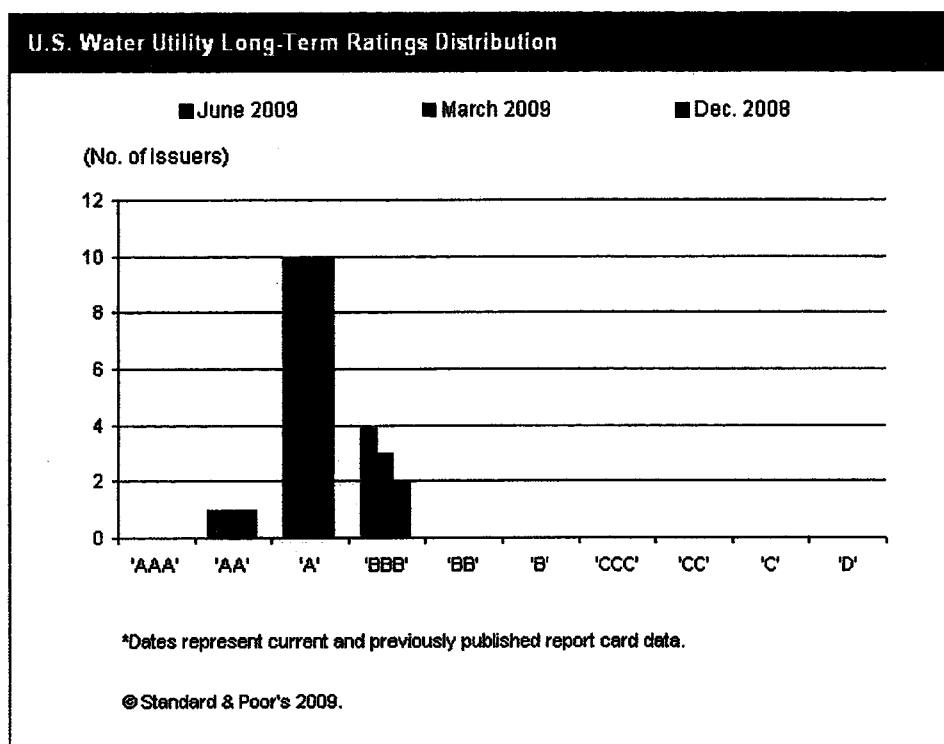
Currently, Standard & Poor's considers all rated U.S. investor-owned water companies to have "excellent" business risk profiles, reflecting supportive regulations, monopolistic market positions, a mostly stable residential customer base, and low operating risk compared with other utilities. Many rated water companies also have modest nonregulated segments, which primarily provide operating and consulting services to water and wastewater facilities. Despite tight margins and low cash flow generation, these nonregulated units pose limited incremental risks to the company's consolidated credit profile. In addition to the complementary nature of the utility's nonregulated segment to its regulated operations, the company mitigates the risks as the water company passes through operating and capital costs to the facility's owner, which are usually highly rated counterparties such as municipalities or the U.S. military. As a result, ratings in the U.S. investor-owned water utility sector continue to display significant stability.

Given their excellent business risk profiles, the most significant differentiating factor for these companies has been financial performance, particularly the level and stability of cash flows. While most of the rated companies have an 'intermediate' financial risk profile, we consider The Baton Rouge Water Works Co. to have a 'modest' financial risk profile, reflecting above-average cash flow and leverage metrics. However, we consider the financial risk profiles of United Water New Jersey Inc. and United Waterworks Inc. to be 'significant' given the additional risks at parent United Water Resources (not rated). The 'aggressive' financial risk profiles of American Water Works Co. and its subsidiaries reflect weak cash flow metrics, significant goodwill impairments, and the need for significant rate relief to cover rising operating costs and capital expenditures.



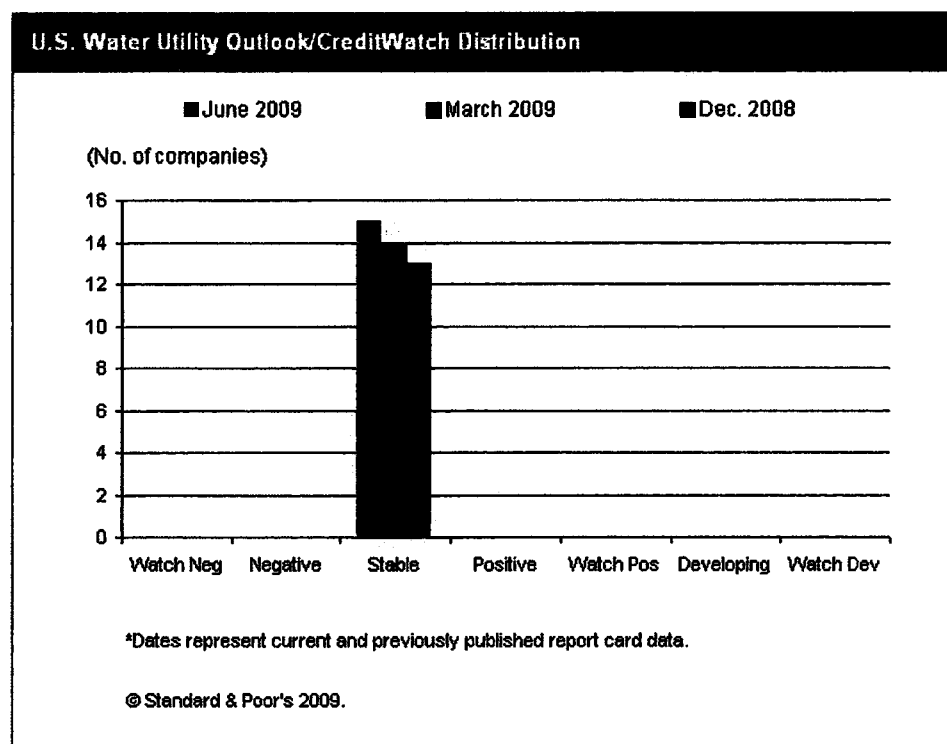
*Industry Report Card: U.S. Investor-Owned Water Utilities Successfully Navigate Turbulent Financial Markets*

**Chart 1**



*Industry Report Card: U.S. Investor-Owned Water Utilities Successfully Navigate Turbulent Financial Markets*

Chart 2



## Issuer Review

Table 1

U.S. Investor-Owned Water Utilities			
Company	Corporate credit rating*	Analyst	Comments
American States Water Co.	A/Stable/--	Kenneth L. Farer	American States Water's financial performance has improved, benefiting from rate increases received in 2009 and 2008. Financial performance is expected to remain robust and cash flows improve from the \$9 million rate relief received in California through step rate increases for 2009. The decoupling measures implemented in California in 2008 have improved stability of revenues and cash flows. Cash flow coverages are strong for the rating, with adjusted FFO to total debt of 17%, and adjusted debt to capital at 57%. Leverage is expected to improve after the completion of the recent \$34 million equity issuance, which we expect the company to use to reduce short term debt levels, bringing leverage closer to 53%.
American Water Capital Corp.	BBB+/Stable/A-2	Kenneth L. Farer	See American Water Works Co. Inc.

*Industry Report Card: U.S. Investor-Owned Water Utilities Successfully Navigate Turbulent Financial Markets*

**Table 1**

U.S. Investor-Owned Water Utilities (cont.)			
American Water Works Co. Inc.	BBB+/Stable/A-2	Kenneth L. Farer	American Water Works' cash flow continues to benefit from rate increases received in multiple jurisdictions. For the 12 months ended March 31, 2009, FFO to total debt was strong for the rating at 11%. However, leverage was high for the rating at 63% following the company's \$450 million goodwill impairment. Pro forma for the company's \$250 million equity issuance in June 2009, we expect leverage to be around 60%, which is adequate for the rating. We expect cash flows to improve further as rate increases are granted related to the company's \$260 million of pending rate cases and rate increases related to additional rate filings. However, we expect the company to meet its significant cash needs, including capital spending plans (\$800 million for 2009), annual dividend payments of \$130 million, and manageable debt maturities, through additional capital market activity. The increased debt levels will likely result in credit metrics remaining at current levels for the next few quarters.
New Jersey-American Water Co.	BBB+/Stable/--	Kenneth L. Farer	See American Water Works Co. Inc.
Pennsylvania-American Water Co.	BBB+/Stable/--	Kenneth L. Farer	See American Water Works Co. Inc.
Aqua Pennsylvania Inc.	A+/Stable/--	Kenneth L. Farer	Parent Aqua America's stable financial performance continues, with cash flows benefiting from rate relief across various states--\$60 million in 2008 and \$23 million in 2009. We expect cash flows to improve further, as the company files rate cases of about \$70 million in the remainder of 2009, including Pennsylvania, its largest operating territory that accounts for more than one-half its cash flows. Adjusted FFO to total debt was a strong 21% at Aqua Pennsylvania for 12 months ended March 31, 2009. Aqua America's adjusted FFO to total debt of 18% for 12 months ended March 31, 2009, was adequate for the rating. Adjusted debt to capital was 57% at Aqua Pennsylvania and 58% at Aqua America, which is adequate for the rating. We expect the financial metrics to remain at current levels, as the company funds its capital expenditure plans of about \$300 million annually for the next years, through additional debt, rate case filings, and infrastructure surcharge mechanisms.
Baton Rouge Water Works Co. (The)	AA/Stable/--	Kenneth L. Farer	Baton Rouge Water's financial performance remains robust, and we expect financial metrics to remain at the current strong levels, benefiting from the rate relief of \$2.5 million received in April 2009. As of March 31, 2009, FFO to total debt was 31%, FFO interest coverage was about 6x, and adjusted debt to capital was 43%. Given its minimal water treatment costs and access to good quality water sources, combined with a strong balance sheet, the company could make some small tuck-in acquisitions without putting pressure on its financial metrics.
California Water Service Co.	A+/Stable/--	Kenneth L. Farer	Parent California Water Service Group's cash flows continue to benefit from an improving regulatory environment and rate relief of \$33 million received in July 2008. The company also received enhanced recovery mechanisms for revenue decoupling and recovery of purchased water costs, which we view as extremely supportive of credit quality. Under California's cost of capital proceedings, California Water Service Co. (CalWater) was granted an allowed of 10.2%. CalWater is expected to file its first consolidated rate case in July 2009, with the new rates likely to be effective in early 2011. Consolidated financial metrics were in line with the rating, with adjusted FFO to total debt at 20%, and adjusted debt to capital at 53% as of March 31, 2009. We expect the company to maintain current financial metrics, as it funds its \$100 million capital spending plans in a balanced manner, through a combination of debt and equity issuances, and internal cash flows.
Connecticut Water Co. (The)	A/Stable/--	Kenneth L. Farer	See Connecticut Water Service Inc.
Connecticut Water Service Inc.	A/Stable/--	Kenneth L. Farer	Connecticut Waters' financial performance continues to be stable, benefiting from rate relief received in 2008. Adjusted FFO to debt coverage was 16% and adjusted debt to capital was 53%, as of March 31, 2009. We expect financial metrics to weaken slightly in 2009, as the company funds its increased capital spending plans, mainly through debt issuances. We anticipate cash flows will improve in 2010, due to the proposed implementation of infrastructure surcharge mechanisms in 2009, and the company's expected rate relief application in early 2010. The announced reduction in rates and the six-month delay in filing its next rate case are not expected to materially affect the company's cash flows. We anticipate adjusted FFO debt coverage of around 14%, and debt to capital of around 55% for year-end 2009, before improving slightly in 2010.
Golden State Water Co.	A/Stable/--	Kenneth L. Farer	See American States Water Co.

*Industry Report Card: U.S. Investor-Owned Water Utilities Successfully Navigate Turbulent Financial Markets*

**Table 1**

U.S. Investor-Owned Water Utilities (cont.)			
Middlesex Water Co.	A-/Stable/--	Kenneth L. Farer	Middlesex Water's cash flows were stable, despite of a 6% decline in water consumption at its New Jersey subsidiary, offset by customer growth in Delaware, and increases in its contracted operation revenues. We expect cash flows to improve further, with the interim rate relief of around \$2.5 million approved at its Tidewater subsidiary in March 2009. We expect the company to issue equity and debt to fund its capital spending plans in 2009. Company's adjusted FFO debt coverage was 11.2% for the 12 months ending March 31, 2009 and adjusted debt to capital was 57%. We expect adjusted FFO debt coverage to move closer to 12%, and leverage to fall to below 55% by the year's end.
United Water New Jersey Inc.	A-/Stable/--	Kenneth L. Farer	See United Waterworks Inc.
United Waterworks Inc.	A-/Stable/--	Kenneth L. Farer	Financial performance at United Waterworks (UWW) and United Water New Jersey (UWNJ) remains stable. Cash flows have benefited from rate case approvals UWW received in July 2008. FFO to debt continues to be about 12% for both UWW and UWNJ, with total debt to capital of around 55%. These levels are adequate for the rating. Given the capital spending plans for 2009, capital contributions from parent-Suez Environnement are likely needed to maintain leverage below 60%.
York Water Co. (The)	A-/Stable/--	Kenneth L. Farer	York Water's cash flow continue to benefit from rate increase received in October 2008. For the 12 months ended March 31, 2009, FFO to total debt improved to 12%, from 11% for year ending Dec. 31, 2008, which is in line with the 'A-' rating. However, leverage continues to be slightly high for the rating, at 59%. We expect cash flows to remain stable, and leverage to improve to around 55%, once the company completes an anticipated equity offering in 2009.

\*Ratings are as of July 9, 2009.

## Rating Activity

There were no rating actions or outlook changes in the first half of the year.

## Selected Articles

**Table 2**

Previously Published U.S. Investor Owned Water Utility Articles	
Article title	Published date
Issuer Ranking: U.S. Investor-Owned Water Utilities, Strongest To Weakest	July 10, 2009
Funding Shortfall Of U.S. Utility Pension And Postretirement Benefits Adds To Industry's Cost Pressure Woes	May 19, 2009
Key Credit Factors: Business And Financial Risks In The Investor-Owned Utilities Industry	Nov. 26, 2008
Credit FAQ: Standard & Poor's Assessments Of Regulatory Climates For U.S. Investor-Owned Utilities	Nov. 25, 2008
Notching Of U.S. Investment-Grade Investor-Owned Utility Unsecured Debt Now Better Reflects Anticipated Absolute Recovery	Nov. 10, 2008
Assessing U.S. Utility Regulatory Environments	Nov. 7, 2008

## Contact Information

**Table 3**

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***Industry Report Card: U.S. Investor-Owned Water Utilities Successfully Navigate Turbulent Financial Markets***

Comments and ratings reflect available public data as of July 9, 2009.

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# Global Credit Portal

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April 19, 2011

### Industry Report Card:

## A Stable Industry Outlook Supports Solid Ratings For U.S. Regulated Gas And Water Utilities

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### Table Of Contents

---

Economic Outlook

Industry Credit Outlook

Stable Outlook Is Likely To Continue

Issuer Review

Recent Rating Activity

Rating Trends

Contact Information

Related Criteria And Research



## Industry Report Card:

# A Stable Industry Outlook Supports Solid Ratings For U.S. Regulated Gas And Water Utilities

Due to a slowly improving economy, natural gas consumption continues to rise (up slightly over 1% in January 2011 versus January 2010 and up nearly 6% in 2010 versus 2009). We expect water consumption, which is generally aligned with population and household growth, to increase, but only minimally, in 2011. Modest changes in gas and water consumption, however, have little impact on credit quality for U.S. investor-owned gas and water utilities. Supportive regulatory decisions and continued access to the capital markets, however, are providing support for stable credit conditions in both sectors. Also, reduced natural gas price-related working capital requirements due to low gas prices are benefiting the gas utilities while additional regulatory filings to address increased capital spending are supporting the water utilities. Therefore, Standard & Poor's Ratings Services' base case 2011 outlook for both industries is stable.

## Economic Outlook

We see little movement in regulated gas and water utilities' financial risk profiles during periods of economic change. The essential service that both utilities provide and the rate-regulated nature of their businesses allow them to generate stable cash flows and recover their costs despite economic conditions. We believe that our outlooks and ratings, which we assess based on our view of industry- and company-specific factors, are unlikely to change even if industry conditions worsen in the near term, as we describe in our pessimistic scenario (see table 1). However, if the economy grows faster than we're expecting in 2011 and 2012, as our optimistic case shows, then there could be some slight improvement in credit quality. Notable increases in housing starts and the number of households increases customer connections while better employment conditions also help to increase a utility's revenues. Regulatory risk could also lessen as concerns about elevated rates diminish and rising equity capital costs boost rate increases.

In our view, a weaker economy can have a much greater effect on a gas utility's nonregulated businesses, such as wholesale trading, retail marketing, and merchant gas storage operations. We typically cut our estimates of these businesses' cash flow contributions to accommodate this possibility, especially as low natural gas prices can hurt cash flow. In the gas storage and wholesale trading businesses, for example, low absolute prices and low price volatility limit companies' ability to generate cash flow. For gas utilities, an increasing contribution to consolidated cash flows from nonregulated businesses is a trend that is putting some pressure on credit quality. The size and degree of credit risk created by nonregulated businesses on the credit profile of water utilities is minimal.

**Industry Report Card: A Stable Industry Outlook Supports Solid Ratings For U.S. Regulated Gas And Water Utilities**

**Table 1**

2011-2012 Scenarios For The U.S. Regulated Utilities Industry							
	Forecast/scenarios*--						--Actual--
	--Pessimistic--		--Baseline--		--Optimistic--		
	2011	2012	2011	2012	2011	2012	
<b>Macroeconomic indicators</b>							
Real GDP (% change)	1.23	(0.23)	2.94	2.64	3.91	4.09	2.85
CPI (% change)	4.26	2.19	2.87	2.06	2.27	1.46	1.65
Core CPI (% change)	1.48	1.96	1.47	1.94	1.37	1.70	0.96
Number of households (mil.)	118.10	118.90	118.30	119.50	118.40	119.80	117.70
Yearly % change	0.31	0.74	0.49	1.02	0.57	1.23	0.33
ECl, wages and salaries (% change)	1.63	1.45	2.03	2.10	2.26	2.55	1.61
Unemployment rate (%)	9.40	10.30	8.70	8.41	8.42	7.33	9.63
Household obligations ratio (%)	15.20	15.10	15.60	15.10	15.20	15.00	16.90
<b>Industry drivers</b>							
Housing starts (mil. units)	0.45	0.66	0.61	0.98	0.77	1.24	0.59
Disposable income, 2000 \$ (% change)	0.64	(0.47)	2.28	1.15	3.06	2.34	1.40
Disposable income (% change)	3.80	1.58	4.51	3.03	4.89	3.69	3.13
Consumer spending, electricity (% change)	(1.02)	2.84	(1.21)	2.52	(0.52)	2.78	5.82
Deflator electricity prices (% change)	1.69	3.01	1.29	1.25	1.17	1.12	0.07
Natural gas % of electricity fuel use	0.23	0.22	0.23	0.22	0.23	0.22	0.23
Coal % of electricity fuel use	0.44	0.46	0.44	0.46	0.44	0.46	0.45
Petroleum % of electricity fuel use	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Power plant nonresidential (% change)	6.30	(13.20)	0.75	(9.14)	6.70	(10.10)	(7.95)
Investment in public utilities (% change)	6.16	(7.67)	2.84	(3.61)	6.76	(4.37)	(7.91)
Investment in electric and gas utilities (% change)	7.40	(11.10)	2.94	(7.23)	7.68	(8.45)	(7.68)
Employment, utilities (mil.)	0.55	0.55	0.55	0.54	0.55	0.54	0.55
Employment, private (mil.)	108.40	108.40	109.40	111.70	109.70	113.30	107.30
PPI electricity (% change)	2.99	3.73	2.44	2.12	2.35	1.91	2.52
PPI coal (% change)	3.41	(2.85)	3.29	(3.36)	3.03	(3.35)	3.84
'BBB' bond yield (%)	8.30	10.70	6.44	8.24	6.11	6.06	6.04
10-yr. Treasury note yield (% change)	4.28	6.58	3.86	5.51	4.15	4.43	3.21
Interest rate spread (%)	4.06	4.15	2.59	2.73	1.96	1.63	2.82
<b>Industry economic outlook</b>	<b>Stable</b>	<b>Stable</b>	<b>Stable</b>	<b>Slightly positive</b>	<b>Slightly positive</b>	<b>Positive</b>	

\*Pessimistic and optimistic forecasts are from the March "U.S. Risks To The Forecast," on RatingsDirect. Baseline forecast from the April U.S. Monthly Forecast Report "Economic Meltdown?," also on RatingsDirect. CPI—Consumer Price Index. PPI—Producer Price Index.

At Standard & Poor's, we publish monthly our economists' scenario of where we think the U.S. economy could be heading. Beyond projecting GDP and inflation, we also include outlooks for other major economic categories. We call this forecast our "baseline scenario," and we use it in all areas of our credit analyses. However, we realize that financial market participants also want to know how we think the economy could worsen--or improve--from our baseline scenario. Any point-in-time forecast of the economy will be wrong; it is simply a question of how far

## *Industry Report Card: A Stable Industry Outlook Supports Solid Ratings For U.S. Regulated Gas And Water Utilities*

wrong. As a result, we now project two additional scenarios, one upside and one downside. We set these scenarios approximately at one standard deviation from the base line (roughly the 20th and 80th percentiles of the distribution of possible outcomes). We use the downside case to estimate the credit impact of an economic outlook weaker than the expected case.

### **Industry Credit Outlook**

In the gas sector, we had two ratings downgrades and no outlook changes during the first quarter. The rating trend, when considering outlooks and CreditWatch listings, is neutral: Of all the gas utilities we rate, 74% have a stable outlook, 13% have a positive or CreditWatch positive listing, while 13% have a negative or CreditWatch negative listing. In the water sector, we had no rating actions or outlook changes during the first quarter. With all the water utilities possessing stable outlooks, we expect the number of prospective rating changes to remain minimal in the near to intermediate term (one to two years).

Both gas and water utilities have relatively high ratings compared with the average for U.S. industrial companies ('B' category). This reflects the large percentage of gas utilities with excellent business risk profiles and to a much lesser extent strong business risk profiles. All water utilities have an excellent business risk profile. Generally offsetting the superior business risk profiles in both industries are the large number of aggressive financial risk profiles. About 49% of the gas industry carries an 'A' category corporate credit rating ('A+', 'A', and 'A-'), roughly 45% is in the 'BBB' category, about 4% is in the 'AA' category, and 2% are speculative grade ('BB+' and below). About 69% of the water utilities carry a 'A' category corporate credit rating, roughly 25% are in the 'BBB' rating category, and about 6% are in the 'AA' rating category. No water utilities are rated speculative grade.

Since 2011 began, Standard & Poor's lowered the corporate credit rating on one gas utility holding company and its operating subsidiary and has changed no water utility ratings. In March, we lowered the corporate credit rating on WGL Holdings Inc. (WGL) and Washington Gas Light Co. to 'A+' from 'AA-'. We lowered the ratings because WGL is increasing the size and consolidated cash flow percentage of its unregulated businesses. We believe these businesses are credit dilutive at WGL's high rating level because they are subject to more cash flow volatility and do not benefit from the regulated profile of the low-risk utility operations.

### **Solid industry fundamentals support the stable outlooks**

*Regulation smoothes cash flows and supports cost recovery.* State regulation will continue to be an influential factor for gas and water utility credit ratings in 2011. Many recent regulatory developments have been positive for credit quality. While average returns on equity (ROE) have trended slightly downward, several jurisdictions have granted enhanced rate-making mechanisms that help ensure greater cash flow stability. Most important are rate "decoupling" and distribution system investment charge (DSIC) mechanisms. Rate decoupling protects a utility's financial performance when conservation leads to lower consumption as it essentially makes the utility whole by increasing customer charges to compensate for lower usage. The DSIC program, prevalent in the water sector, allows for rate increases for nonrevenue producing investments to replace aging infrastructure outside of general rate proceedings. We expect capital spending in the water sector to continue on an upward trend due to a generally aging infrastructure and stringent water treatment and quality standards. The DSIC program would be especially helpful in our optimistic case if capital spending increased notably to avoid cash flow "lags," meaning that any revenue increases associated with today's capital spending would not need to wait until the next rate case. Our pessimistic case, which includes economic contraction, higher unemployment rates, and dropping consumer sentiment, could threaten regulatory support from state commissions.

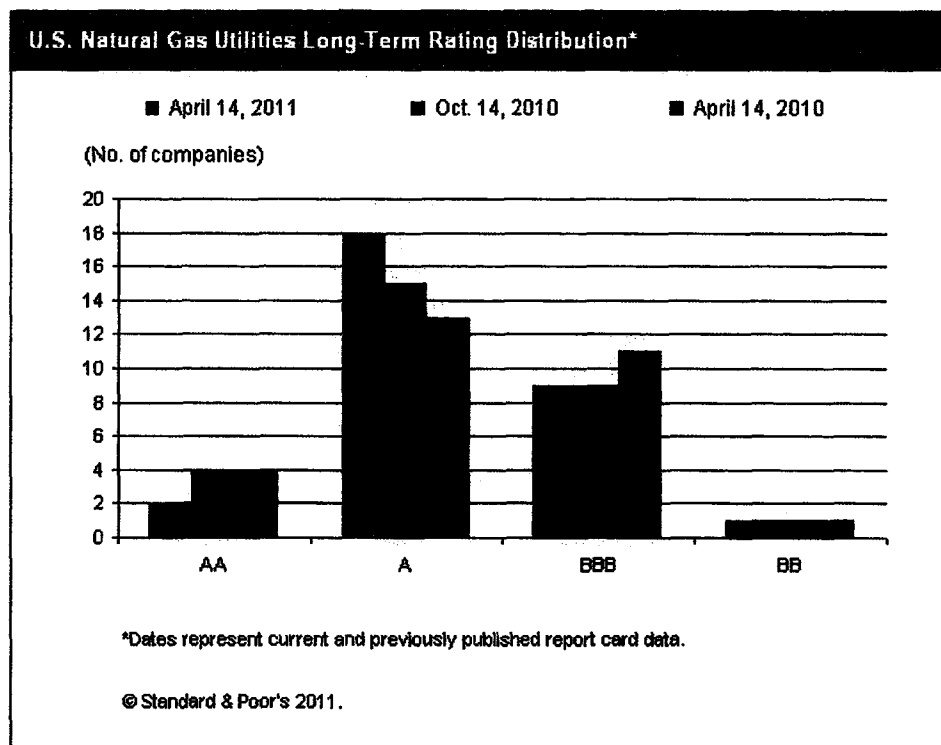
*Industry Report Card: A Stable Industry Outlook Supports Solid Ratings For U.S. Regulated Gas And Water Utilities*

**Liquidity is also favorable.** Liquidity is a strength for many gas and water utilities. Credit fundamentals indicate that most, if not all, gas and water utilities should continue to have ample access to funding sources and credit availability as banking syndicates are willing to negotiate longer term credit facilities. Some utilities are taking advantage of favorable capital markets access, strong investor appetite, and low interest rates to prefinance or extend debt maturities. Debt maturities in the gas and water sectors are relatively small in 2011 and will likely be refinanced with new debt or with borrowings under their revolving credit facilities. Some common stock has also been issued to partially fund construction spending, which helps to balance the capital structure between debt and equity.

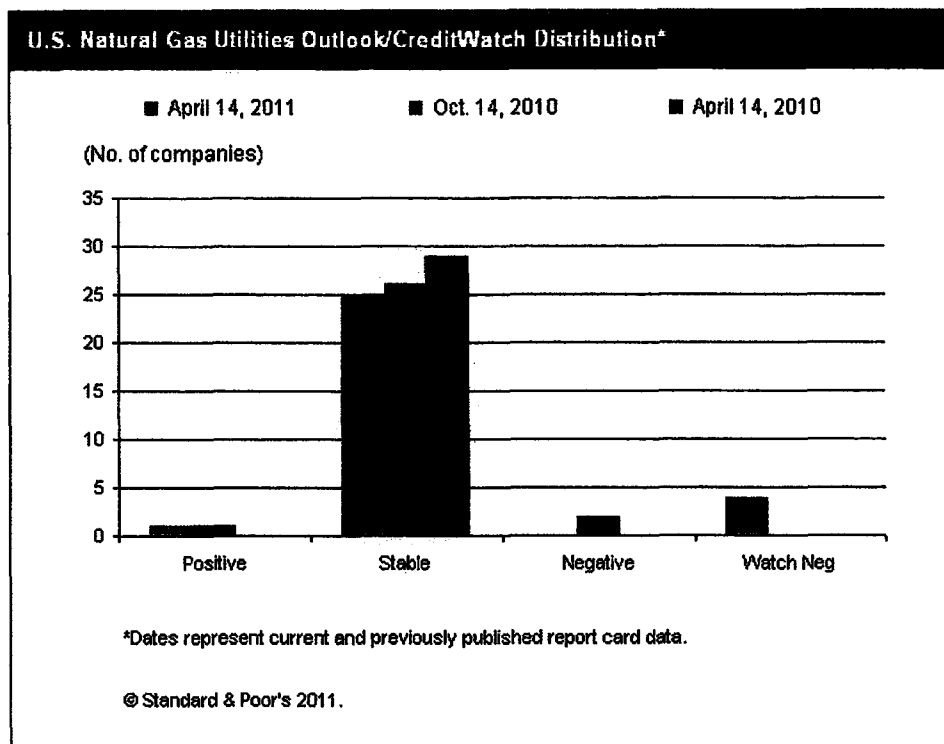
## Stable Outlook Is Likely To Continue

Our outlook for the gas and water utility industries remain stable based on gradual economic recovery, generally supportive regulatory decisions, including mechanisms that allow for timely cost recovery, receptive capital markets, and adequate access to liquidity.

Chart 1

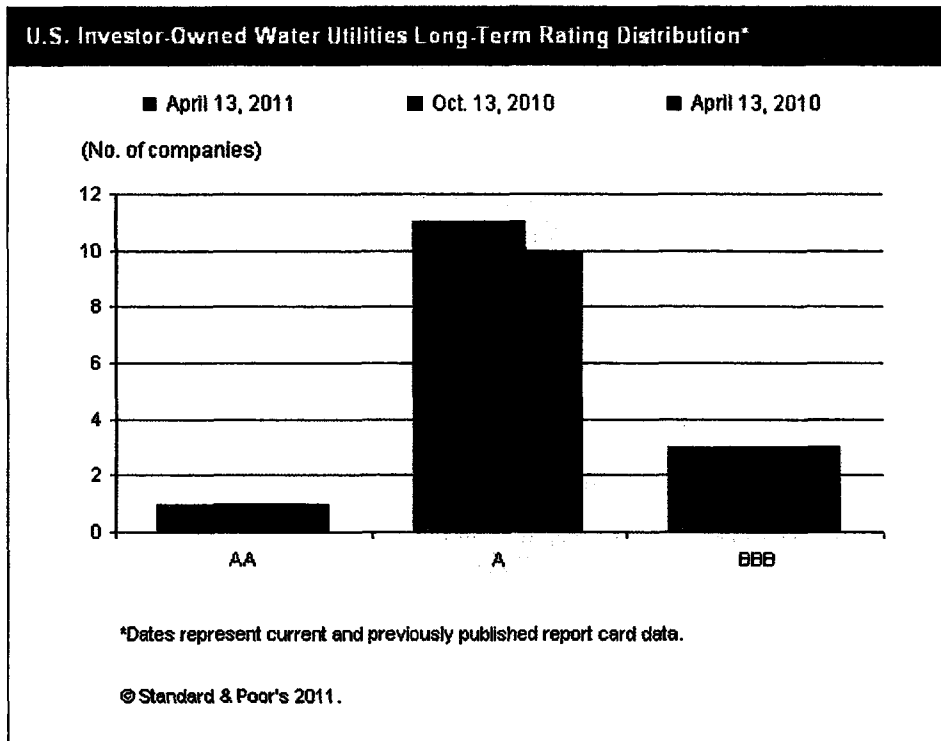


**Industry Report Card: A Stable Industry Outlook Supports Solid Ratings For U.S. Regulated Gas And Water Utilities**



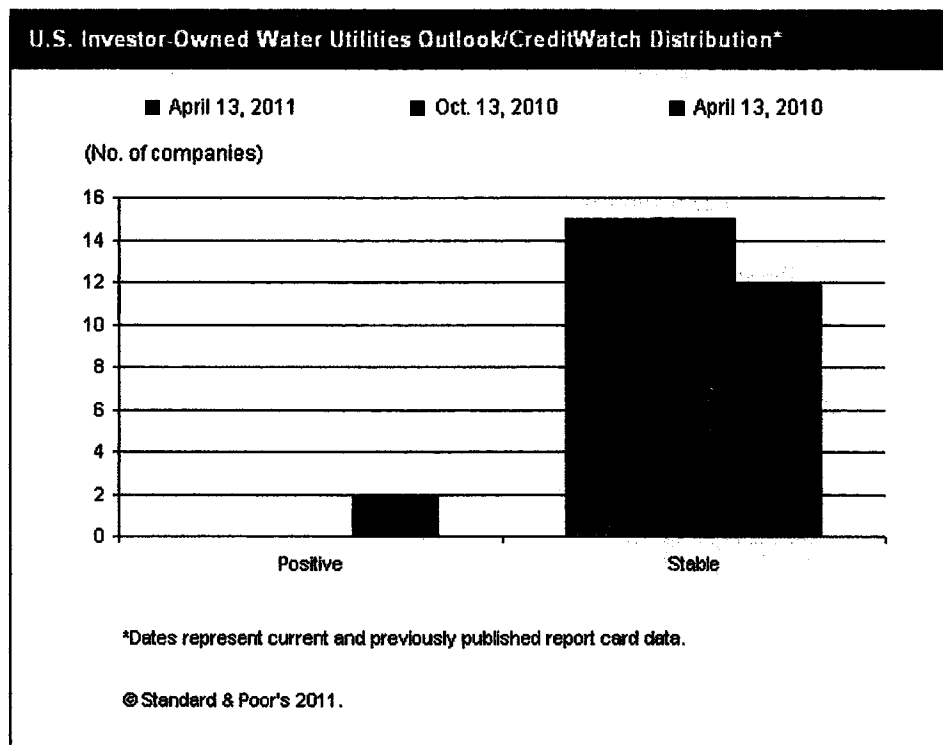
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**Chart 3**



*Industry Report Card: A Stable Industry Outlook Supports Solid Ratings For U.S. Regulated Gas And Water Utilities*

Chart 4



## Issuer Review

Table 2

Gas company/Credit rating as of April 14, 2011/Comments	Analyst
<b>AGL Resources Inc. (A-/Watch Neg/A-2)</b> Our ratings on AGL Resources are still on CreditWatch negative due to the company's pending acquisition of Nicor Inc. We expect the transaction to likely close in late 2011 or early 2012, and that pro forma credit metrics will worsen from current levels.	David Lundberg, CFA
<b>Atlanta Gas Light Co. (A-/Watch Neg/--)</b> Atlanta Gas Light is a wholly owned subsidiary of AGL Resources, Inc. Our ratings on Atlanta Gas Light are on CreditWatch negative due to AGL's pending acquisition of Nicor Inc. We expect the acquisition will likely close in late 2011 or early 2012, and that pro forma consolidated credit metrics will worsen from current levels.	David Lundberg, CFA
<b>Atmos Energy Corp. (BBB+/Stable/A-2)</b> We expect that the company's regulated operations to benefit from planned rate increases, and for cash flows to increase modestly. Current credit metrics such as funds from operations (FFO) to total debt of 25% remain adequate for the rating but do benefit from bonus depreciation.	David Lundberg, CFA
<b>Bay State Gas Co. (BBB-/Stable/--)</b> We base Bay State Gas Co.'s ratings on the consolidated credit profile of its parent company, NiSource Inc. We expect NiSource's adjusted FFO to total debt to be about 13% in 2011.	William Ferara
<b>Indiana Gas Co. Inc. (A-/Stable/--)</b> We expect Indiana Gas, an indirect, wholly owned subsidiary of Vectren Corp., to continue to generate stable cash flows. Given the	David

*Industry Report Card: A Stable Industry Outlook Supports Solid Ratings For U.S. Regulated Gas And Water Utilities*

regulatory mechanisms in place, cash flow volatility will likely remain low. On a standalone basis, Indiana Gas's credit metrics should remain strong for the rating, with FFO to debt in the 80% area when considering external debt only or 20% to 25% when including intracompany debt. Lundberg, CFA

**Laclede Gas Co. (A/Stable/A-1)**

Laclede Gas's credit metrics for the year ended Dec. 31, 2010 improved from a year ago. The improvement reflects the rate case increase in Missouri effective Sept. 1, 2010 that added roughly \$8 million in 2010 and a \$3 million decrease in operating and maintenance expenses. Earnings and cash flow in fiscal 2011 should continue to benefit from the rate case as well as lower operating costs. For 2010, Laclede Gas's net income contributed around 92% to the consolidated net income.

Michael V.  
Grande

**Laclede Group Inc. (The) (A/Stable/--)**

Earnings and cash flow in fiscal 2011 should benefit from the continued impact of the rate case as well as lower operating costs. We continue to expect Laclede Energy's (nonregulated operations) contributions to decline marginally. We expect FFO/debt to be around 23% in 2011.

Michael V.  
Grande

**New Jersey Natural Gas Co. (A/Stable/A-1)**

The ratings on New Jersey Natural Gas reflect the consolidated credit profile of parent New Jersey Resources Corp. (not rated), of which the company is the principal subsidiary. It continues to benefit from regulatory initiatives to reduce regulatory lag for projects or the effects of conservation. Another positive for the company is an above-average customer growth rate of about 1.5% due to construction of new homes and conversions from other fuel sources. We expect the ratio of FFO/debt on a consolidated basis to be about 27% in 2011.

Michael V.  
Grande

**NiSource Inc. (BBB-/Stable/--)**

We revised the company's liquidity descriptor to adequate following its new \$1.5 billion revolving credit facility, which closed on March 3, 2011. We expect NiSource's approximate \$1 billion capital spending program in 2011 to lead to about \$200 million to \$300 million of negative discretionary cash flow. The most meaningful source of NiSource's new growth projects over the long-term is in the Marcellus Shale gas-gathering area. We expect NiSource's adjusted FFO to total debt to be about 13% in 2011.

William  
Ferara

**Nicor Gas Co. (AA/Watch Neg/A-1+)**

We expect AGL Resources' acquisition of Nicor to close in late 2011/early 2012. Based on our calculated pro forma credit metrics, we would expect that the new company's corporate credit rating would be no lower than 'BBB+' when the acquisition closes. We expect Nicor Gas's operating performance and regulatory relationships to remain solid and its financial metrics strong. We expect Nicor Gas's adjusted FFO to total debt will be about 30% in 2011.

William  
Ferara

**Nicor Inc. (AA/Watch Neg/A-1+)**

We expect AGL Resources' acquisition of Nicor to close in late 2011/early 2012. Based on our calculated pro forma credit metrics, we would expect that the new company's corporate credit rating would be no lower than 'BBB+' when the acquisition closes. Nicor Gas remains Nicor's key credit strength and is continuing its solid performance. Subsidiary Tropical Shipping, which does not rely on Nicor for capital or liquidity needs, is performing weakly due to a notable reduction in demand. We view Nicor's Central Valley Gas Storage project, in which it expects to begin injecting natural gas in 2011, as presenting incremental risks to the consolidated business risk profile. We expect Nicor's adjusted FFO to total debt to be about 35% in 2011.

William  
Ferara

**Northern Indiana Public Service Co. (BBB-/Stable/NR)**

We base NIPSCO's ratings on the consolidated credit profile of its parent company, NiSource Inc. The company's new rate case filing is net revenue-neutral and seeks to rebalance the cost allocation whereby commercial and industrial customers' rates would increase. We do not expect this to dramatically influence parent NiSource's consolidated cash flow metrics given its cash flow diversity. NIPSCO is launching a major environmental and clean energy program totaling about \$600 million over the next six to eight years, which it can recover through rates as part of its settlement with the Environmental Protection Agency. We expect NiSource to generate adjusted FFO to total debt of about 13% in 2011.

William  
Ferara

**Northwest Natural Gas Co. (A+/Stable/A-1)**

Northwest Natural received further regulatory support when Oregon approved a balancing account to defer pension costs that are higher than currently collected in rates. This will help stabilize the annual pension expense without increasing customer rates. The pace of the company's nonregulated business ventures remains a focus after the October 2010 completion of the Gill Ranch storage facility (slightly more than \$200 million) and the potential Palomar pipeline project, with Northwest Natural's share of the costs nearly \$400 million. We expect the company's adjusted FFO to total debt to be about 20% to 25% in 2011.

William  
Ferara

**PNG Companies LLC (BBB-/Stable/--)**

We expect the Pennsylvania Public Utilities Commission to grant rate increases to help improve PNG's cash flows, given current low customer costs. Current metrics are in line with our expectations at initial rating. We expect the operating company, Peoples Natural Gas, to pursue additional rate increases that will likely take effect in the second half of 2011. These increases will allow for FFO to debt to be in the low teens and debt to capital between 50% and 55% in 2011.

William  
Ferara



*Industry Report Card: A Stable Industry Outlook Supports Solid Ratings For U.S. Regulated Gas And Water Utilities*

<b>Piedmont Natural Gas Co. Inc. (A/Stable/--)</b>	We expect credit measures to remain consistent with FFO to debt in the 25% to 27% range. Liquidity has improved due to the company's new three-year \$650 million revolving credit agreement with a \$200 million accordion feature. This will further support the construction of its power generation service project portfolio. We expect capital spending to remain relatively heavy in the near term due to expenses related to its projects.	William Ferara
<b>Questar Corp. (A/Stable/A-1)</b>	For 2011, we expect Questar Corp to maintain strong consolidated financial metrics, with FFO to debt of about 26% and total debt to EBITDA between 2.6x and 2.8x. Questar has adequate liquidity to fund 2011 capital spending of about \$340 million, which it divides fairly evenly among its three business segments.	Michael V. Grande
<b>Questar Gas Co. (A/Stable/--)</b>	The ratings on Questar Gas reflect the consolidated credit profile of parent Questar Corp. (A/Stable/A-1). We expect Questar Gas to achieve stand-alone FFO to debt in the mid-20% area and a debt to capitalization ratio of about 55% in 2011. The company's favorable regulatory treatment and customer growth should allow the company to grow its rate base in the high single digits in 2011.	Michael V. Grande
<b>Questar Pipeline Co. (A/Stable/--)</b>	The ratings on Questar Pipeline reflect the consolidated credit profile of parent Questar Corp. (A/Stable/A-1). With a weighted average of about 12 years, the company placed its Overthrust expansion into service in February 2011, about \$15 million under budget. It has about \$106 million of capital projects slated for 2011. We expect Questar Pipeline's 2011 stand-alone adjusted debt to EBITDA to be about 3x and to have an FFO to debt ratio between 22% and 25%.	Michael V. Grande
<b>SEMCO Energy Inc. (BBB-/Stable/--)</b>	We base the rating on SEMCO on the consolidated credit profile of indirect parent Continental Energy Systems LLC. On June 29, 2010, subsidiary SEMCO Gas filed for a rate increase of \$19.8 million (6.3% increase), use of a single tariff between its two existing divisions, a pipeline replacement program, and a three-year pilot program of a decoupling mechanism. Overall, we expect SEMCO will pursue higher rates and more cost-recovery mechanisms, thus improving key credit metrics from current levels. We expect SEMCO to have FFO to debt between 8% and 10% on a consolidated basis.	Michael V. Grande
<b>San Diego Gas &amp; Electric Co. (A/Stable/A-1)</b>	Sizable capital spending of about \$1.3 billion per year will notably increase SDG&E's rate base. Besides base replacement and maintenance expense, the largest item in the capital spending budget is the \$1.9 billion Sunrise Powerlink electric transmission line, which is in full-scale construction and should be in service in second-half 2012. SDG&E has an application outstanding for its 2012 general rate case which seeks a 6% rate increase, with the California Public Utilities Commission expected to make a decision by year-end 2011. We do not expect the decision to dramatically influence SDG&E's stand-alone credit metrics. We expect SDG&E's adjusted FFO to debt to be adequate for the rating in 2011, at roughly 20%.	William Ferara
<b>Sempra Energy (BBB+/Stable/A-2)</b>	The acquisition of the remaining 50% interest in Chilquinta Energia S.A. and a 38% interest in Luz del Sur S.A. for \$875 million exemplifies the company's opportunistic pursuit of international assets. Sizable capital expenditures focused on the regulated utilities will further add to its cash flow stability and increase the percentage of consolidated cash flows from the regulated utilities. The largest project is the \$1.9 billion Sunrise Powerlink electric transmission line that the company expects to be in service in 2012. We expect Sempra's adjusted FFO to debt ratio will be adequate for the rating at roughly 20% in 2011 and that cash flows will be highly predictable.	William Ferara
<b>SourceGas LLC (BB+/Stable/--)</b>	Consolidated credit metrics for the year ended Dec. 31, 2010 improved as compared with the same period in 2009, with FFO to debt of 15% and total debt to capital of 54%. Cash flows should improve due to the continued impact of the Colorado rate case and lower deferred taxes. However, we do not expect significant performance improvements over the intermediate term as the company will likely use excess cash flow for sponsor distributions and not debt reduction.	Michael V. Grande
<b>South Jersey Gas Co. (BBB+/Stable/A-2)</b>	For 2011, we expect FFO/debt of around 20%, with debt to capital around 56%. Utility cash flows will improve from the recently completed rate case, as well as a full year of income produced by the capital investment recovery tracker. The company expects strong performance from projects to improve cash flows. We expect the overall cash flow contribution of the nonregulated business to decline to about 40% over the next year.	Michael V. Grande
<b>Southern California Gas Co. (A/Stable/A-1)</b>	Sizable capital expenditures of about \$800 million per year will notably increase SoCal Gas's rate base. Besides base replacement and maintenance expenses, the largest item in the company's capital spending budget is a \$900 million advanced meter reading project, which is in the contracting and planning phase. SoCal Gas has an application outstanding for its 2012 general rate case, which seeks a 6% revenue increase, with the California Public Utilities Commission expected to make a decision by year-end 2011. We do not	William Ferara

*Industry Report Card: A Stable Industry Outlook Supports Solid Ratings For U.S. Regulated Gas And Water Utilities*

expect the decision to dramatically influence influence SoCal Gas's stand-alone credit metrics. We expect SoCal Gas's adjusted FFO to debt to be adequate for the rating in 2011, at roughly 25%.

**Southern Indiana Gas & Electric Co. (A-/Stable/--)**

Southern Indiana Gas & Electric, an indirect wholly owned subsidiary of Vectren Corp., posted strong results in 2010, partially due to a hotter-than-average summer. On a weather-normalized basis, SDG&E's cash flows should grow modestly, pending a rate case outcome expected in the first half of 2011. On a stand-alone basis, SDG&E's credit metrics will likely remain strong for the rating, with FFO to debt in the 65% to 70% area when considering only external debt or about 25% when also including intracompany debt.

David  
Lundberg, CFA

**Southwest Gas Corp. (BBB/Positive/--)**

Credit metrics for Southwest Gas continue to remain strong for the rating, with FFO to total debt of 25% and debt to capital of 54% for the year-ended 2010. The general rate cases filed in Nevada and California provided about \$27 million of additional operating margin in 2010. We continue to monitor management of the regulatory relationship in Arizona, which is a key factor related to any ratings upgrade.

Michael V.  
Grande

**Vectren Corp. (A-/Stable/--)**

We expect Vectren to post consistent results in 2011, with cash flows flat to modestly increasing. The pending rate case at Southern Indiana Gas & Electric, higher coal prices, and higher backlog in the infrastructure services division should benefit results. However, the energy marketing division will likely suffer due to low natural gas volatility. We expect FFO to debt in the mid 20% area in 2011, partially aided by bonus depreciation.

David  
Lundberg, CFA

**Vectren Utility Holdings Inc. (A-/Stable/A-2)**

Vectren Utility Holdings, a wholly owned subsidiary of Vectren Corp., posted strong results in 2010, partially due to hotter than average summer weather. On a weather-normalized basis, VUHI's cashflows should grow modestly, pending a rate case outcome in southern Indiana. On a stand-alone basis, we expect FFO to debt to be in the high 20% area and debt to capital to be roughly 50%.

David  
Lundberg, CFA

**WGL Holdings Inc. (A+/Stable/A-1)**

WGL's strategy to increase the size and consolidated cash flow percentage of its nonregulated businesses, the pace of their growth, and the percentage of consolidated cash flows they represent resulted in a one-notch downgrade of the company's credit rating in March 2011. We expect WGL's utility Washington Gas Light (about 90% of consolidated operating income) is to retain its strong stand-alone business and financial risk performance. We expect WGL's adjusted FFO to total debt to be about 25% in 2011.

William  
Ferara

**Washington Gas Light Co. (A+/Stable/A-1)**

We expect Washington Gas Light to retain its strong stand-alone business and financial risk performance. The company continues to add new customers as well as implement operational efficiencies. We expect the Jan. 31, 2011 rate case filing in Virginia for about \$30 million to support cash flows toward the end of 2011. Partially offsetting these positives are higher employee-related costs and tax rates. We expect Washington Gas Light's adjusted FFO to total debt to be about 27% in 2011.

William  
Ferara

**Table 3**

Water company/Credit rating as of April 13, 2011/Comments	Analyst
<p><b>American States Water Co. (A+/Stable/--)</b></p> <p>We view American States Water proposed sale of its regulated operations in Arizona as mildly positive for the company's business risk profile. The Arizona regulator's recent approval of the sale paves the way for the company to use proceeds to pay down its short-term borrowings and defer the need for future planned equity issuances. We expect FFO to total debt to be in the mid-20% area in 2011.</p>	William Ferara
<p><b>American Water Works Co. Inc. (BBB+/Stable/A-2)</b></p> <p>American Water Works plans to use the proceeds from selling EPCOR USA to reduce equity and debt financings. The company is not planning on any equity offerings in 2011 due to the sale, which included regulated assets in Arizona and New Mexico for \$470 million in cash. We expect cash flows to improve as regulators grant rate increases related to the company's \$95 million of pending rate cases as well as rate increases related to additional rate filings. We expect FFO/debt to be about 13% in 2011.</p>	William Ferara
<p><b>Aqua Pennsylvania Inc. (A+/Stable/--)</b></p> <p>We expect Aqua Pennsylvania's financial performance to approximate current levels, supported by additional rate increases and existing recovery mechanisms. Proceeds from the company's \$143 million first mortgage bond issuance in November 2010 will finance existing capital expenditures and refinance existing debt. Parent Aqua America's stable financial performance continues, with cash flows benefiting from rate relief across various states. We expect Aqua America's adjusted FFO to total debt to be about 19% in 2011.</p>	William Ferara
<p><b>Baton Rouge Water Works Co. (The) (AA/Stable/--)</b></p> <p>Baton Rouge Water's financial performance continues to perform in line with expectations and should remain stable. Minimal water treatment costs and access to good quality water sources support the company's business risk profile, although the</p>	William Ferara

*Industry Report Card: A Stable Industry Outlook Supports Solid Ratings For U.S. Regulated Gas And Water Utilities*

company's very small size and its geographic concentration are credit concerns. We expect adjusted FFO to total debt to be about 30% to 35% in 2011.

<b>California Water Service Co. (A+/Stable/-)</b> We expect credit metrics to improve in 2011 as it receives the incremental cash flows from its rate case. We expect adjusted FFO to debt to be about 15% to 18%. In December 2010, the state regulator authorized rate increases that will add more than \$25 million to annual gross revenues and an additional \$8 million in rate relief that it may obtain after it completes certain capital projects. Increased debt and interest expense resulting from a November 2010 \$100 million first mortgage bond issuance had deflated credit metrics.	William Ferara
<b>Connecticut Water Co. (The) (A/Stable/-)</b> We base Connecticut Water Service's ratings on the consolidated credit profile of its parent company, Connecticut Water Co. Connecticut Water's stand-alone credit profile benefits from a low-risk business model, although its small size and geographic concentration temper its strengths, and stable financial profile.	William Ferara
<b>Connecticut Water Service Inc. (A/Stable/-)</b> Connecticut Water's financial performance continues to be stable, benefiting from the July 2010 rate relief that granted an \$8 million revenue increase. Credit metrics are adequate for the rating--we expect adjusted FFO to debt to be around 15% in 2011.	William Ferara
<b>Golden State Water Co. (A+/Stable/-)</b> We base Golden State Water's ratings on the consolidated credit profile of its ultimate parent, American States Water. On a stand-alone basis, the company continues to benefit from additional cash flows from its recently approved rate cases. In 2011, we expect Golden State Water's adjusted FFO to total debt to be in the low to mid-20% range. The company issued about \$60 million of long-term debt in April 2011 to pay down short-term borrowings and retire some long-term debt.	William Ferara
<b>Middlesex Water Co. (A-/Stable/-)</b> Middlesex Water's credit metrics are in line with with the rating. We expect adjusted FFO to debt to be about 15% in 2011. We expect ratios to become more predictable and improve slightly in the long term due to the anticipated approval of Middlesex Water's purchased water adjustment clause, several subsidiary rate increase filings in 2011, and the Delaware regulator's approval of Tidewater's debt service interest coverage of 1.34%.	William Ferara
<b>New Jersey-American Water Co. (BBB+/Stable/-)</b> We expect New Jersey-American Water's credit quality to remain stable based on steady operating and financial performance. We base New Jersey-American Water's ratings on the consolidated credit profile of its ultimate parent, American Water Works Co.	William Ferara
<b>Pennsylvania-American Water Co. (BBB+/Stable/-)</b> We expect Pennsylvania-American Water's credit quality to remain stable based on steady operating and financial performance. We base the company's ratings on the consolidated credit profile of its ultimate parent, American Water Works Co.	William Ferara
<b>San Jose Water Company (A/Stable/-)</b> We expect credit metrics to remain adequate for the rating, with adjusted FFO to debt at about 15% to 18% in 2011. Cash flows in 2010 weakened due to several factors, including higher taxes paid, a \$450 million note issuance, and working capital changes. We expect the company to meet its cash requirements through balanced capital market activity.	William Ferara
<b>United Water New Jersey Inc. (A-/Stable/-)</b> Financial performance at United Water New Jersey remain stable. We expect adjusted FFO to debt to be about 12% in 2011, which is adequate for the rating. Due to capital spending plans for 2011, the company will likely need capital contributions from parent Suez Environnement to maintain leverage below 60% (currently in the low-mid 50% area).	William Ferara
<b>United Waterworks Inc. (A-/Stable/-)</b> United Waterworks' financial performance is marginally improving, with adjusted FFO to debt expected to be about 13% in 2011. The company expects to issue debt in the near-term to refinance long-term debt and pay down short-term borrowings. Due to capital spending plans for 2011, the company will likely need capital contributions from parent Suez Environnement to maintain leverage below 60% (currently in the low-mid 50% area).	William Ferara
<b>York Water Co. (The) (A-/Stable/-)</b> A \$15 million debt issuance in October 2010 caused credit metrics to deteriorate marginally, however we expect the company's cash flows to increase in 2011 due to the recently approved \$3.4 million rate increase. We expect adjusted FFO to debt to improve to about 18% in 2011. The company does not expect to file a base rate increase request this year.	William Ferara

*Industry Report Card: A Stable Industry Outlook Supports Solid Ratings For U.S. Regulated Gas And Water Utilities*

## Recent Rating Activity

**Table 4**

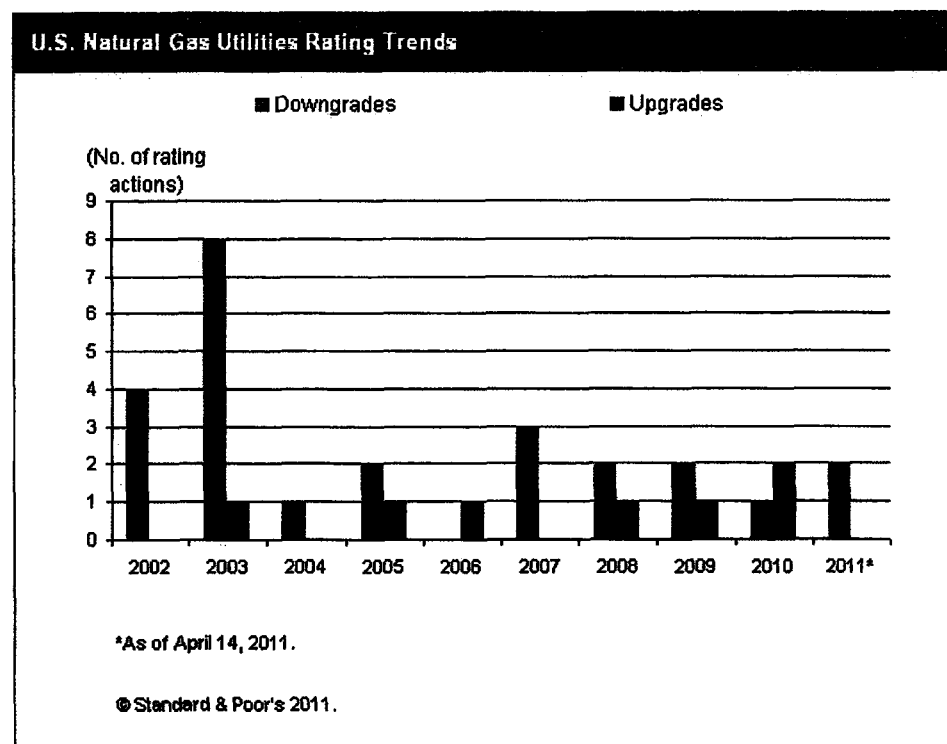
Recent Rating Actions*			
Company	To	From	Date
AGL Resources Inc.	A-/Watch Neg/A-2	A-/Stable/A-2	Dec. 7, 2010
Atlanta Gas Light Co.	A-/Watch Neg/--	A-/Stable/--	Dec. 7, 2010
Nicor Gas Co.	AA/Watch Neg/A-1+	AA/Stable/A-1+	Dec. 7, 2010
Nicor Inc.	AA/Watch Neg/A-1+	AA/Stable/A-1+	Dec. 7, 2010
Qwestar Corp.	A/Stable/A-1	--/--/A-1	Dec. 7, 2010
South Jersey Gas Co.	BBB+/Stable/A-2	BBB+/Stable/--	March 21, 2011
WGL Holdings Inc.	A+/Stable/A-1	AA-/Negative/A-1+	March 18, 2011
Washington Gas Light Co.	A+/Stable/A-1	AA-/Negative/A-1+	March 18, 2011

\*Actions taken since the last report card dated Oct. 14, 2010.

There were no rating actions in the water sector since the last report card.

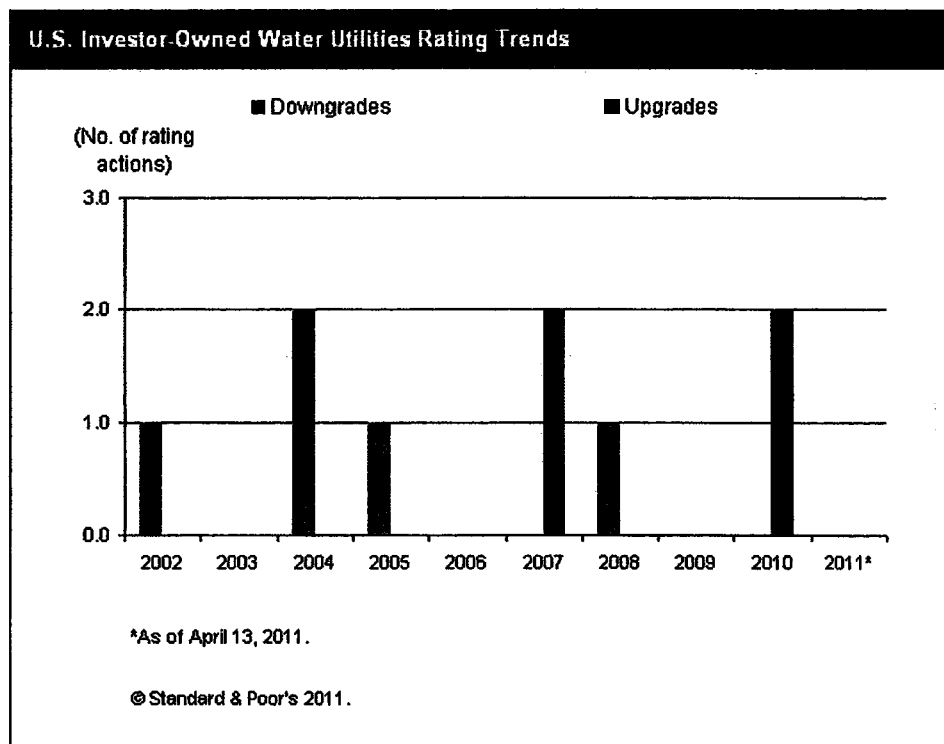
## Rating Trends

**Chart 5**



*Industry Report Card: A Stable Industry Outlook Supports Solid Ratings For U.S. Regulated Gas And Water Utilities*

Chart 6



## Contact Information

Table 5

Contact Information			
Credit analyst	Location	Phone	E-Mail
William Ferara	New York	(1) 212-438-1776	bill_ferara@standardandpoors.com
Michael Grande	New York	(1) 212-438-2242	michael_grande@standardandpoors.com
David Lundberg, CFA	New York	(1) 212-438-7551	david_lundberg@standardandpoors.com

## Related Criteria And Research

Top 10 Investor Questions: U.S. Gas And Water Utilities, Feb.15, 2011

Comments and ratings reflect available public data as of April 13, 2011.

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## RatingsDirect<sup>®</sup>

October 26, 2011

## Middlesex Water Co.

**Primary Credit Analyst:**

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### Table Of Contents

---

Major Rating Factors

Rationale

Outlook

Accounting



# Middlesex Water Co.

## Major Rating Factors

### Strengths:

- Low-risk monopoly water-distribution business
- Supportive regulatory environment with favorable cost recovery mechanisms that enhance cash flow predictability
- Predominately residential and commercial customer base provides a stable revenue base

### Corporate Credit Rating

A-/Stable/-

### Weaknesses:

- Financial risk profile includes stable but weak cash flow metrics
- Limited service territory
- Elevated capital spending requirements for infrastructure replacement and water-quality standards

## Rationale

Standard & Poor's Ratings Services' ratings on Middlesex Water Co. reflect an excellent business risk profile and significant financial risk profile. The company owns regulated water and wastewater utility systems in Middlesex County, N.J., and New Castle, Kent, and Sussex counties in Delaware. Middlesex Water's excellent business risk profile reflects a low-risk monopoly water distribution business, a supportive regulatory environment with favorable cost-recovery mechanisms that enhance cash flow predictability, improving financial metrics, and a predominately residential and commercial customer base that provides a stable revenue base. Stable but weak cash flow metrics, the company's small size, geographic concentration, and increasing costs of compliance with water-quality standards temper the strengths somewhat.

The New Jersey Board of Public Utilities (NJBP), Pennsylvania Public Utilities Commission, and Delaware Public Service Commission regulate Middlesex Water's subsidiaries. We view these regulators' policies as supportive, particularly in Delaware and Pennsylvania, due to their infrastructure surcharge mechanisms. In March 2010, the NJBP granted a rate increase of \$7.8 million, about 50% of the requested amount, and allowed a return on equity of 10.3%. Also, effective July 1, 2011, Tidewater's DEPSC approved DSIC was increased to 1.98% from 1.34%. The DSIC was proposed in New Jersey, and the utility expects a decision by year-end 2011. An approval would be credit supportive to the utility. Tidewater Utilities (not rated), the Delaware subsidiary, requested an overall rate request of \$6.9 million in September 2011. We expect Middlesex Water to continue to request a rate increase in each of its jurisdictions every few years to minimize rate shock for its customers and support its financial profile.

Middlesex Water benefits from better-than-average demographics in its markets. Residential customers account for about 45% of revenues, and long-term contracts for water sales represent about 15%, providing a predictable revenue base. We expect customer growth to slow slightly from historical levels in the intermediate term, reflecting general economic conditions and reduced residential construction. Although this could reduce growth in cash flows, it could also reduce capital spending, which would be neutral for credit metrics. The company obtains about 70% of its total water supply from the Delaware and Raritan Canal, about 20% from groundwater sources, and purchases the remainder from other water utilities. The low amount of purchased water maintains predictable operating costs.

*Middlesex Water Co.*

The company generates about 10% of its revenues from nonregulated water and wastewater services and water-line maintenance programs. We view these operations as fairly low risk, given the contracts long-term nature with municipal entities.

Middlesex Water's significant financial risk is characterized by relatively high debt leverage and weak cash flows. Leverage metrics somewhat improved from the company's June 2010 stock issuance that repaid a portion of the outstanding short-term debt. As of June 30, 2011, the company had a total adjusted debt-to-capital ratio of 51%. Its adjusted funds from operations (FFO)-to-total debt ratio improved to 15% from 13% in the same period of the previous year. We expect modest deterioration in key ratios as the company funds a portion of its capital expenditures from its revolving credit lines.

**Liquidity**

Under our corporate liquidity methodology, we consider Middlesex Water's liquidity to be adequate. Projected sources of liquidity (cash, FFO, and credit facility availability) exceed projected uses (maintenance and significant discretionary capital expenditures, dividends, and modest debt maturities) by roughly 1.7x during the next 12 months. Quantitatively this maps to the strong category, but the company's small size and upcoming credit line maturities apply that the liquidity is more appropriately adequate.

For the 12 months ended June 30, 2011, Middlesex Water reported cash from operations of \$26 million, credit facility availability of about \$40 million, capital expenditures of \$23 million, debt maturities of \$4 million, and dividends of \$11 million. We do not expect forecast 2011 capital expenditures of \$23 million to pose a significant issue for the company because spending in Delaware and Pennsylvania will provide incremental cash flow from the infrastructure mechanisms. The company can issue about \$100 million in first mortgage bonds per its existing debt-incurrence tests. In our view, Middlesex Water's liquidity position also benefits from its ability to lower capital spending, if necessary, and utilities proven track record of successfully accessing the capital markets even during very challenging market conditions.

**Recovery analysis**

We assign recovery ratings to first mortgage bonds (FMBs) issued by investment-grade U.S. utilities, which can result in issue ratings being notched above a utility's corporate credit rating (CCR) depending on the CCR category and the extent of the collateral coverage. The investment-grade FMB recovery methodology is based on the ample historical record of nearly 100% recovery for secured bondholders in utility bankruptcies and our view that the factors that supported those recoveries (limited size of the creditor class and the durable value of utility rate-based assets during and after a reorganization given the essential service provided and the high replacement cost) will persist in the future. Under our notching criteria, we consider the limitations of FMB issuance under the utility's indenture relative to the value of the collateral pledged to bondholders, management's stated intentions on future FMB issuance, as well as the regulatory limitations on bond issuance when assigning issue ratings to utility FMBs. FMB ratings can exceed a utility's CCR by up to one notch in the 'A' category, two notches in the 'BBB' category, and three notches in speculative-grade categories.

Middlesex's FMBs benefit from a first-priority lien on substantially all of the utility's real property owned or subsequently acquired. Collateral coverage is over 1.5x which supports a recovery rating of '1+' and an 'A' first mortgage bond rating, one notch above the corporate credit rating. The '1+' recovery rating reflects the very strong asset protection provided by the utility's asset base, the relatively stable value of assets of regulated utilities even in a default, and restrictions on the issuance of additional secured debt.

*Middlesex Water Co.*

## Outlook

The stable outlook reflects our expectations for continued supportive regulation, timely rate relief, and stable financial performance. We could lower the rating if there is an unfavorable shift in regulatory conditions or credit metrics deteriorate such that the FFO-to-debt ratio remains less than 12% on a consistent basis. Although we do not expect to do so in the near term, we could raise the rating if rate increases and returns on equity are sufficient to consistently achieve an FFO-to-debt ratio of 15% and a debt-to-capital ratio in the 50%-55% range.

## Accounting

We adjust Middlesex Water's financial statements for pension and postretirement obligations, accrued interest, and hybrid securities. The adjustments include adding a debt equivalent, interest expense, and depreciation to the company's reported financial statements. As a result, for year-end 2010 we added a debt equivalent of about \$18.8 million for pension and postretirement obligations and about \$1.6 million for accrued interest.

We characterize Middlesex Water's \$3.4 million of preferred securities as having "intermediate equity" content. In accordance with our hybrid securities criteria, we ascribe 50% of the amount to debt and 50% to equity when calculating adjusted financial ratios.

Table 1

Middlesex Water Co. -- Peer Comparison				
Industry Sector: Water				
	Middlesex Water Co.	The York Water Co.	Connecticut Water Service Inc.	American Water Works Co. Inc.
Rating as of Oct. 24, 2011	A-/Stable/--	A-/Stable/--	A/Stable/--	BBB+/Stable/A-2
--Average of past three fiscal years--				
(Mil. \$)				
Revenues	95.0	36.3	62.4	2,496.1
EBITDA	34.2	22.0	25.6	1,007.4
Net income from cont. oper.	12.2	7.6	9.8	(175.9)
Funds from operations (FFO)	23.1	13.8	20.7	697.6
Capital expenditures	25.7	15.6	24.8	859.4
Free operating cash flow	(3.7)	(1.6)	(5.6)	(164.7)
Discretionary cash flow	(13.6)	(7.6)	(13.3)	(282.7)
Cash and short-term investments	3.3	0.4	2.4	15.0
Debt	184.0	92.4	135.7	6,140.9
Equity	151.9	82.6	108.8	4,093.3
Adjusted ratios				
EBITDA margin (%)	36.0	60.5	41.1	40.4
EBITDA interest coverage (x)	4.7	4.2	4.7	3.0
EBIT interest coverage (x)	3.6	3.3	3.6	2.1
Return on capital (%)	7.4	9.2	7.2	6.5
FFO/debt (%)	12.6	14.9	15.2	11.4

Middlesex Water Co.

Table 1

Middlesex Water Co. -- Peer Comparison (cont.)				
Free operating cash flow/debt (%)	(2.0)	(1.8)	(4.1)	(2.7)
Debt/EBITDA (x)	5.4	4.2	5.3	6.1
Total debt/debt plus equity (%)	54.8	52.8	55.5	60.0

Table 2

Middlesex Water Co. -- Financial Summary					
Industry Sector: Water					
	--Fiscal year ended Dec. 31--				
	2010	2009	2008	2007	2006
Rating history	A-/Stable/--	A-/Stable/--	A-/Stable/--	A-/Stable/--	A-/Stable/--
(Mil. \$)					
Revenues	102.7	91.2	91.0	86.1	81.1
EBITDA	38.1	31.3	33.1	31.4	30.1
Interest expense	7.2	7.3	7.3	6.9	7.4
Net income from continuing operations	14.3	10.0	12.2	11.8	10.0
Funds from operations (FFO)	25.7	23.1	20.7	19.5	17.2
Capital expenditures	29.2	19.7	28.1	21.6	30.4
Dividends paid	10.6	9.7	9.5	9.3	8.3
Debt	177.3	192.0	182.6	153.3	147.9
Preferred stock	1.7	1.7	1.7	2.0	2.0
Equity	175.0	141.3	139.5	135.2	131.3
Debt and equity	352.3	333.3	322.1	288.5	279.2
Adjusted ratios					
EBITDA margin (%)	37.1	34.4	36.4	36.5	37.1
EBITDA interest coverage (x)	5.3	4.3	4.6	4.6	4.0
EBIT interest coverage (x)	4.0	3.2	3.5	3.6	3.1
FFO int. cov. (x)	4.5	4.1	3.8	3.8	3.3
FFO/debt (%)	14.5	12.0	11.3	12.7	11.6
Discretionary cash flow/debt (%)	(7.2)	(5.4)	(9.7)	(8.2)	(15.4)
Net cash flow/capex (%)	51.4	67.9	40.1	47.4	29.2
Debt/EBITDA (x)	4.7	6.1	5.5	4.9	4.9
Debt/debt and equity (%)	50.3	57.6	56.7	53.2	53.0
Return on capital (%)	7.8	6.5	7.8	8.1	8.2
Return on common equity (%)	8.4	6.3	8.4	8.6	8.2
Common dividend payout ratio (un-adj.) (%)	74.4	98.1	78.0	78.8	83.7

Middlesex Water Co.

Table 3

Reconciliation Of Middlesex Water Co. Reported Amounts With Standard & Poor's Adjusted Amounts (Mil. \$)

--Fiscal year ended Dec. 31, 2010--

Middlesex Water Co. reported amounts

	Debt	Shareholders' equity	Revenues	EBITDA	Operating income	Interest expense	Cash flow from operations	Cash flow from operations	Dividends paid	Capital expenditures
Reported	155.3	176.6	102.7	35.8	26.6	6.0	25.6	25.6	10.7	29.6
<b>Standard &amp; Poor's adjustments</b>										
Intermediate hybrids reported as equity	1.7	(1.7)	--	--	--	0.1	(0.1)	(0.1)	(0.1)	--
Postretirement benefit obligations	18.8	--	--	2.0	2.0	0.8	2.0	2.0	--	--
Capitalized interest	--	--	--	--	--	0.4	(0.4)	(0.4)	--	(0.4)
Share-based compensation expense	--	--	--	0.3	--	--	--	--	--	--
Reclassification of nonoperating income (expenses)	--	--	--	--	0.5	--	--	--	--	--
Reclassification of working-capital cash flow changes	--	--	--	--	--	--	--	(1.4)	--	--
Debt - Accrued interest not included in reported debt	1.6	--	--	--	--	--	--	--	--	--
Total adjustments	22.0	(1.7)	0.0	2.3	2.4	1.2	1.5	0.1	(0.1)	(0.4)

Standard & Poor's adjusted amounts

	Debt	Equity	Revenues	EBITDA	EBIT	Interest expense	Cash flow from operations	Funds from operations	Dividends paid	Capital expenditures
Adjusted	177.3	175.0	102.7	38.1	29.0	7.2	27.1	25.7	10.6	29.2

Ratings Detail (As Of October 26, 2011)

Middlesex Water Co.

Corporate Credit Rating A-/Stable/--

Senior Secured (4 Issues) A

Corporate Credit Ratings History

22-Jun-2005 A-/Stable/--

30-May-2003 A/Negative/--

31-May-1991 A/Stable/--

Business Risk Profile Excellent

Financial Risk Profile Significant

*Middlesex Water Co.*

**Ratings Detail (As Of October 26, 2011) (cont.)**

**Debt Maturities**

As of Dec. 31, 2010:

2011: \$4.4 mil.

2012: \$4.6 mil.

2013: \$4.6 mil.

2014: \$4.7 mil.

2015: \$4.8 mil.

Thereafter: \$115.2 mil.

\*Unless otherwise noted, all ratings in this report are global scale ratings. Standard & Poor's credit ratings on the global scale are comparable across countries. Standard & Poor's credit ratings on a national scale are relative to obligors or obligations within that specific country.

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October 28, 2011

### Research Update:

## Connecticut Water Service Inc. And Subsidiary Rating Outlook Revised To Negative From Stable On Acquisition Pact

#### Primary Credit Analyst:

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### Table Of Contents

---

Overview

Rating Action

Rationale

Outlook

Related Criteria And Research

Ratings List

[www.standardandpoors.com/ratingsdirect](http://www.standardandpoors.com/ratingsdirect)

1

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## Research Update:

# Connecticut Water Service Inc. And Subsidiary Rating Outlook Revised To Negative From Stable On Acquisition Pact

## Overview

- Connecticut Water Service Inc. (CTWS) has reached a definitive agreement to purchase Aqua Maine Inc. from Aqua America Inc. for a total enterprise value of approximately \$53.5 million and expects to close on the transaction in first-quarter 2012.
- The combination will create the largest publicly-traded water utility company in New England.
- We affirmed our 'A' corporate credit rating on CTWS and its primary subsidiary, Connecticut Water Co.
- We revised the ratings outlook on both CTWS and Connecticut Water Co. to negative from stable.
- CTWS plans to issue a material amount of common equity in the next 12 to 15 months to reduce its debt balance, which could improve credit metrics.
- The negative outlook reflects our expectation of notably weaker credit metrics as a result of the debt-leveraged acquisition of Aqua Maine as well as additional near-term debt funding of its capital expenditure program.

## Rating Action

On Oct. 28, 2011, Standard & Poor's Ratings Services revised its rating outlooks on Connecticut Water Service Inc. (CTWS) and its primary subsidiary, Connecticut Water Co. (CWC), to negative from stable. We affirmed the 'A' long-term corporate credit ratings on both entities.

## Rationale

The negative outlook reflects our expectation of notably weaker credit metrics as a result of the utility's debt-leveraged acquisition of Aqua Maine as well as additional near-term debt funding of its capital expenditure program.

CTWS will issue \$36.5 million of debt to finance the transaction while also assuming \$17 million of debt at Aqua Maine. In addition, CTWS expects to issue \$24 million of incremental debt by year-end 2011 to fund capital expenditures. As a result, we expect year-end 2011 funds from operations (FFO) to debt to be about 11%, which is not commensurate for the 'A' rating. CTWS plans to issue a material amount of common equity in the next twelve to fifteen months to reduce its debt balance, which could lead us to revise the outlook to stable. Absent the equity issuance and associated decrease in the company's debt



*Research Update: Connecticut Water Service Inc. And Subsidiary Rating Outlook Revised To Negative From Stable  
On Acquisition Pact*

balance, we would lower our ratings on CTWS and CWC, likely to 'A-'.

The ratings on regulated water utility CTWS reflect an excellent business risk profile and significant financial risk profile, in our assessment. CWC provides water service to more than 90,000 customers in 55 towns throughout Connecticut. The Aqua Maine transaction will add an additional 16,000 customers, making it the largest publicly-traded water utility company in New England. CWC typically provides more than 90% of CTWS's operating income.

CTWS's excellent business risk profile reflects a low-risk monopoly water-distribution business, a supportive regulatory environment with favorable cost-recovery mechanisms that enhance cash flow predictability, a mostly residential and commercial customer base that provides stable revenues, and solid operations. The company's small size and geographic concentration somewhat temper its strengths.

The Connecticut Department of Utility Control (DPUC) regulates the utility. We view the DPUC's policies as supportive of credit quality, including the surcharge mechanisms, which allow the company to recover capital spending costs outside of traditional rate proceedings. The most recently approved rate case, in July 2010, increased revenues by \$8 million (50% of the company's first-year request) without subsequent increases as requested in CWC's application. However, an allowed return on equity (ROE) of 9.75% is materially lower than the previously approved ROE of 10.125% and the company's request of 11.3% and generally subpar when compared with other U.S. water utilities. The utility has benefited from a surcharge mechanism that allows recovery of costs associated with the replacement of aging infrastructure by adding an additional \$2.2 million in revenues. CTWS's nonregulated subsidiaries include real estate company Chester Realty Inc. (not rated) and New England Water Utility Services Inc. (not rated), which provides water and sewer-related services. The nonregulated operations, in addition to real estate sales by the regulated subsidiaries, have historically accounted for less than 10% of revenues and we expect this level to continue to increase materially from these levels. A mostly fee-based structure, a close connection to the company's core business, and modest capital requirements mitigate the risks of the nonregulated operations, which are higher than those of the regulated utility.

We characterize the financial risk profile as significant due to high debt leverage and weak cash flow metrics. These factors are somewhat offset by moderate financial policies and stable cash flows. As of June 30, 2011, CTWS had total debt, including capitalized operating leases and tax-effected pension and postretirement obligations, of \$148 million, with an adjusted debt-to-capital ratio of about 56%. For the year-ended 2011, we expect funds from operations to debt of about 11%, which is weak for the rating. We expect the company to issue a material amount of common equity to partially fund the Aqua Maine transaction and reduce its debt balance, which will help metrics improve to an FFO-to-debt ratio of about 15%.

**Research Update: Connecticut Water Service Inc. And Subsidiary Rating Outlook Revised To Negative From Stable On Acquisition Pact**

## Liquidity

Under Standard & Poor's corporate liquidity methodology, we consider Connecticut Water Service Inc.'s consolidated liquidity to be "adequate". The company's projected sources of liquidity consist of FFO of about \$24 million and availability under its \$40 million revolving credit facility of about \$14 million, and debt to purchase Aqua Maine. Projected uses of cash include maintenance and significant discretionary capital expenditures and shareholder distributions. Projected sources of liquidity exceed projected uses by 1.4x during the next 12 months. For the 12 months ended June 30, 2011, Connecticut Water Service Inc. reported FFO of \$24 million, capital expenditures of \$23 million, the purchase price of Aqua Maine of \$36 million, and dividends of \$8 million. The company plans to access the capital markets in either in the fourth quarter of 2011 or first quarter of 2012 by issuing up to \$24 million in private activity bonds. The company is also issuing debt to finance the Aqua Maine transaction, but plans to issue equity to maintain its credit metrics.

The company is required to comply with certain covenants in connection with the various long-term agreements. As of June 30, 2011, the company was in compliance with the required leverage levels (debt-to-capital ratio of less than 70% and EBITDA interest coverage of more than 2x). Utilities generally have a proven track record of successfully accessing capital markets, even during very challenging market conditions.

## Outlook

The negative outlook reflects our expectation of notably weaker credit metrics as a result of the company's debt-leveraged acquisition of Aqua Maine as well as additional near-term debt funding of its capital expenditure program. We expect year-end 2011 FFO to debt to be about 11%, which is not commensurate for the 'A' rating. We would likely lower the rating on CTWS and CWC, possibly to 'A-', if FFO to total debt remained below 14% absent the company's expected equity issuance and associated decrease in debt leverage. We would revise the outlook to stable if the company is able to improve credit metrics in the 15%-18% range after the equity offering.

## Related Criteria And Research

- U.S. Regulated Gas And Water Utilities' Credit Quality Remains Stable, Oct. 6, 2011
- Top 10 Investor Questions: U.S. Gas And Water Utilities, Feb. 15, 2011

## Ratings List

### Ratings Affirmed; Outlook Action

	To	From
Connecticut Water Service Inc.		
Corporate Credit Rating	A/Negative/--	A/Stable/--

*Research Update: Connecticut Water Service Inc. And Subsidiary Rating Outlook Revised To Negative From Stable  
On Acquisition Pact*

The Connecticut Water Co.  
Corporate Credit Rating

A/Negative/--

A/Stable/--

Complete ratings information is available to subscribers of RatingsDirect on the Global Credit Portal at [www.globalcreditportal.com](http://www.globalcreditportal.com). All ratings affected by this rating action can be found on Standard & Poor's public Web site at [www.standardandpoors.com](http://www.standardandpoors.com). Use the Ratings search box located in the left column.

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# Global Credit Portal<sup>®</sup>

## RatingsDirect<sup>®</sup>

December 19, 2011

### Research Update:

## California Water Service Co. Outlook Revised To Negative On Weak Credit Metrics; Ratings Affirmed

#### Primary Credit Analyst:

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### Table Of Contents

---

Overview

Rating Action

Rationale

Outlook

Related Criteria And Research

Ratings List

[www.standardandpoors.com/ratingsdirect](http://www.standardandpoors.com/ratingsdirect)

1

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## Research Update:

# California Water Service Co. Outlook Revised To Negative On Weak Credit Metrics; Ratings Affirmed

## Overview

- We expect Cal Water's credit metrics to remain weak in the near term as compared with other water utilities at the same rating.
- We are affirming our corporate credit rating on the company and revising the outlook to negative.
- We could lower the rating if the company sustains its funds from operations/debt ratio at or roughly below 16%.

## Rating Action

On Dec. 19, 2011, Standard & Poor's Ratings Services revised its rating outlook on California Water Service Co. (Cal Water) to negative from stable. We affirmed the 'A+' long-term corporate credit rating and the 'AA-' issue-level rating. The recovery rating of '1+' remains unchanged, and indicates highest expectation (100%) of recovery if a default occurs.

## Rationale

We changed the outlook to negative to reflect our belief that the company will retain credit metrics that are weak for the 'A+' rating. The rating on Cal Water reflects the consolidated credit profile of parent, California Water Service Group (CWSG; unrated). As of Sept. 30, 2011, CWSG had \$519.8 million of reported debt. Cal Water, which provides about 95% of CWSG's revenues and operating income, serves more than 470,000 customers in 83 communities throughout California. The remaining revenues at CWSG mainly come from regulated water utility subsidiaries Hawaii Water Service Co., Washington Water Service Co., and New Mexico Water Service Co. CWSG also owns Utility Services, a small, nonregulated subsidiary involved in low-risk services associated with water systems.

Cal Water's excellent business risk profile stems from a supportive regulatory environment, limited competition, strong, largely residential markets, and relatively low operating risk. Somewhat tempering these strengths are capital requirements associated with infrastructure replacement needs, compliance with water quality standards, and limited control of future water supply. The company's intermediate financial risk profile reflects stable regulated revenues, timely recovery of capital spending, and strong access to capital markets.

*Research Update: California Water Service Co. Outlook Revised To Negative On Weak Credit Metrics; Ratings Affirmed*

The California Public Utilities Commission (CPUC), which regulates Cal Water, has granted a number of supportive cost-recovery mechanisms to allow the company to generate stable cash flows and recover costs with minimal regulatory lag. However, as a result of the pipeline explosion in San Bruno, California in 2010, we believe regulation will become somewhat stricter. Cal Water recovers a significant portion of revenues under fixed monthly charges and benefits from a mechanism that insulates revenues from reduced usage due to customer conservation or weather. In addition, the company adjusts rates to reflect capital investments between rate cases and passes all purchased water costs through to customers. On Nov. 3, 2011, the CPUC Division of Ratepayer Advocates proposed a settlement authorizing a return on equity (ROE) of 9.99%, a decline of about 20 basis points. We view a 10% ROE as the industry standard, and expect that the allowed ROE will be approved. Despite the decline in ROE we still view California as mildly supportive because it has the most regulatory mechanisms than any other state. The company will file its next general rate case in mid-2012 for all of the 24 California districts. The new rates will go into affect on Jan. 1, 2014.

Cal Water benefits from a stable and predictable revenue base as residential and business customers account for about 93% of revenues. About 5% of its supply comes from surface water, and the remainder it either purchases or gets from groundwater in equal percentages.

For the 12 months ended Sept. 30, 2011, CWSG's financial metrics were weak for the rating, but continue to benefit from the rate case approved in December 2010. Adjusted funds from operations (FFO) to debt coverage improved to about 16% from 14% a year earlier, and FFO interest coverage slightly improved to 3.2x from 3.1x in the same period last year. Leverage of 59% as of Sept. 30, 2011, up from 56%, is high for the rating. Total adjusted debt, including tax-affected pensions and post-retirement obligations, was \$662 million as of Sept. 30, 2011. Standard & Poor's debt equivalent related to pensions and postretirement adjustment remained high at \$115 million.

#### **Liquidity**

We view Cal Water's liquidity as strong under our corporate liquidity methodology. For the next 12 months, we expect liquidity sources to exceed uses by roughly 3x. As of Sept. 30, 2011, the company had FFO of \$103 million, about \$45 million cash on hand, and about \$360 million available under its credit lines, which allow for borrowing of up to \$400 million. Cal Water's credit facilities mature in 2016.

Capital requirements include capital spending of about \$130 million, annual dividends of \$25 million, and manageable debt maturities over the next few years. The company will need external financing for a large portion of its capital needs, and the company has an existing \$350 million shelf for debt and equity for the next three years. We believe that Cal Water will maintain its balanced capital structure as it funds the cash flow deficit with debt issues, equity offerings, regulatory surcharges, and rate increases.

*Research Update: California Water Service Co. Outlook Revised To Negative On Weak Credit Metrics; Ratings Affirmed*

### Recovery analysis

We rate Cal Water's senior secured first mortgage bonds (FMB) 'AA-', one notch higher than the corporate credit rating, based on a recovery rating of '1+' under our recovery methodology for regulated utilities. We assign recovery ratings to FMBs issued by U.S. utilities, and this can result in issue ratings being notched above the corporate credit rating on a utility, depending on the corporate credit rating category and the extent of the collateral coverage. We base the investment-grade FMB recovery methodology on the ample historical record of nearly 100% recovery for secured bondholders in utility bankruptcies and our view that the factors that supported those recoveries (the small size of the creditor class and the durable value of utility rate-based assets during and after a reorganization, given the essential service provided and the high replacement cost) will persist.

Under our notching criteria, we consider the limitations of FMB issuance under the utility's indenture relative to the value of the collateral pledged to bondholders, management's stated intentions on future FMB issuance, and the regulatory limitations on bond issuance when assigning issue ratings to utility FMBs. FMB ratings can exceed a utility corporate credit rating by as much as one notch in the 'A' category, two notches in the 'BBB' category, and three notches in speculative-grade categories. Cal Water's collateral coverage of more than 1.5x supports a recovery rating of '1+' and an issue rating of 'AA-', one notch above the corporate credit rating.

### Outlook

The negative outlook reflects our view that the company will retain credit metrics that are weak for the 'A+' rating. Although credit metrics are expected to improve from the authorized California rate case and enhanced cost-recovery mechanisms by 2012, we expect such ratios to be weak for the current rating when compared with other 'A+' rated water utilities. We could lower the rating if the company's FFO/debt is sustained at or roughly below 16%. We could revise the outlook to stable if credit metrics improve at a quicker pace as a result of paying off debt.

### Related Criteria And Research

- Criteria: Key Credit Factors: Business And Financial Risks In The Investor-Owned Utilities Industry, published Nov. 26, 2008.
- U.S. Regulated Gas And Water Utilities' Credit Quality Remains Stable, Oct. 6, 2011
- Top 10 Investor Questions: U.S. Gas And Water Utilities, Feb. 15, 2011

### Ratings List

Ratings Affirmed; Outlook Revised

To

From

California Water Service Co.

***Research Update: California Water Service Co. Outlook Revised To Negative On Weak Credit Metrics; Ratings Affirmed***

Corp. credit rating	A+/Negative/--	A+/Stable/--
Senior secured	AA-	
Recovery rating	1+	

Complete ratings information is available to subscribers of RatingsDirect on the Global Credit Portal at [www.globalcreditportal.com](http://www.globalcreditportal.com). All ratings affected by this rating action can be found on Standard & Poor's public Web site at [www.standardandpoors.com](http://www.standardandpoors.com). Use the Ratings search box located in the left column.



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January 30, 2012

### Summary:

## Pennsylvania-American Water Co.

#### Primary Credit Analyst:

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### Table Of Contents

---

Rationale

Outlook

Related Criteria And Research

## Summary:

# Pennsylvania-American Water Co.

**Credit Rating:** BBB+/Stable/--

## Rationale

The ratings on Pennsylvania-American Water Co. reflect the consolidated credit quality of parent American Water Works Co. Inc. (AWW). Pennsylvania-American accounts for about 20% of AWW's revenues and about 28% of cash flow. Pennsylvania-American Water's favorable regulatory environment, strong services territory, stable, mostly residential customer base, absence of competition, and low operating risk support the utility's stand-alone excellent business risk profile. Pennsylvania-American Water's regulator, the Pennsylvania Public Utilities Commission, allows the addition of capital spending to rate base outside of traditional rate proceedings, rate cases based on a future test year, and a consolidated rate structure.

A favorable competitive position, a diverse and supportive regulatory environment, and a stable, above-average service territory support AWW's excellent business risk profile. AWW's regulatory framework includes reasonably allowed returns on equity and various cost-recovery mechanisms, including incentives for infrastructure improvements. The company's geographic diversity provides it with some market, cash-flow, and regulatory diversification. We view AWW's operating risks associated with its nonregulated operations as fairly low. AWW's aggressive financial profile, elevated capital-spending requirements for infrastructure replacement, increased costs of compliance with water quality standards, and the company's reliance on acquisitions to provide growth partly offset these strengths.

AWW provides regulated water and wastewater services to about 3.3 million customers in 18 states. The company's regulated utility subsidiaries represent about 89% of total revenues, but have provided more than 95% of adjusted EBITDA for the past three years. The company's nonregulated subsidiaries engage in water and wastewater facility management and maintenance, as well as design and construction consulting services related to water and wastewater plants. We view these nonregulated segments as having modest incremental risk for AWW, due to their lack of cash flow contribution and modest expected capital requirements.

A state commission regulates each of AWW's regulated subsidiaries, which supports revenue and cash flow stability. The average allowed return on equity (ROE) in AWW's seven largest jurisdictions, which account for about 80% of consolidated revenues, is about 10%. This is similar to the average allowed ROE in the water sector. In a number of jurisdictions, which represent about 50% of consolidated revenues, the utility recovers replacement capital spending between rate cases up to a stated percentage. The importance of infrastructure surcharge mechanisms has increased, given AWW's capital program of about \$1 billion per year. Certain states also allow for surcharges related to the cost of power, chemicals, and purchased water. For the next few years, we expect AWW to file additional rate cases and request additional recovery mechanisms to cover rising operating costs, capital expenditures, and pension and other postretirement obligations.

The U.S. Environmental Protection Agency believes that infrastructure replacement needs for water systems are significant over the next 20 years. AWW estimates that it will need to spend about \$1 billion annually in each of the next three years for replacement of infrastructure, new facilities to comply with water quality standards, and

*Summary: Pennsylvania-American Water Co.*

projects to enhance reliability, quality of service, and efficiency. AWW's reliability of supply is high, as the company owns a substantial number of treatment facilities for surface and groundwater treatment, and the majority of supply comes from surface and groundwater. In 2011, surface water provided 65% of the company's water supply, groundwater 28%, and it purchased about 7%.

Consolidated financial metrics are improving. In 2011, regulatory commissions granted AWW about \$118 million of general rate increases in various states, including \$99 million in New Jersey, Pennsylvania, and Arizona. The company asks for rate increases to cover rising operating costs, capital expenditures, and pension and other postretirement obligations.

For the 12 months ended Sept. 30, 2011, AWW's adjusted funds from operations (FFO) totaled \$895 million. FFO to debt was 13.9%, which is acceptable for the rating. Total debt to capital remained around 60% during the same period. Substantially higher capital expenses are significant risks that may prevent adequate improvements to the company's financial profile. Over the next 12 months we expect FFO to improve slightly due to additional rate increases, although a sustained improvement in both consolidated FFO to debt and debt to total capital may not materialize, given the company's financing needs.

In March 2011, AWW announced that it has entered into an agreement to sell to EPCOR Water (USA) its regulated operations in Arizona and New Mexico for an estimated \$470 million. We view the transaction as marginally beneficial to AWW's business and risk profile, albeit not material enough to influence the outlook. AWW will use a portion of the sale proceeds to reduce debt (less than 5% of consolidated debt). Arizona and New Mexico are some of the relatively weaker and smaller states that AWW serves, totaling less than 5% of cash flows. Similarly, in July 2011, AWW announced the sale of its regulated operations in Ohio to Aqua America Inc. for \$120 million and a purchase of Aqua America's regulated operations in New York for about \$70 million. These announcements do not affect AWW's ratings.

#### **Liquidity**

The short-term ratings on AWW and AWCC are 'A-2'. We view the company's overall liquidity as adequate. For the upcoming 12 months, we expect liquidity sources to exceed uses by more than 1.2x. Cash sources consist of projected FFO of about \$900 million and revolver availability of \$259 million. As of Sept. 30, 2011 there were no borrowings outstanding on the revolvers. However, we discount the borrowing availability on the revolver by about \$425 million to account for commercial paper and other short-term borrowings and do not give credit to a portion of the credit facility that expires within the next 12 months. Cash uses consist of expected total capital spending of about \$1 billion in 2012, although mandatory and compliance-related expenses are only a fraction of that amount. Other cash uses include dividend distributions of about \$165 million, debt maturities of about \$34 million and pension plan contributions of about \$150 million. Other potential cash uses, such as working capital needs are not significant.

#### **Recovery analysis**

We rate Pennsylvania-American Water's first mortgage bonds (FMB) 'A', two notches above the corporate credit rating, based on a recovery rating of '1+' under our recovery methodology for regulated utilities. We assign recovery ratings to FMBs issued by U.S. utilities, and this can result in issue ratings being notched above the corporate credit rating on a utility, depending on the corporate credit rating category and the extent of the collateral coverage.

We base the investment-grade FMB recovery methodology on the ample historical record of nearly 100% recovery for secured-bond holders in utility bankruptcies and our view that the factors that supported those recoveries (the

*Summary: Pennsylvania-American Water Co.*

small size of the creditor class, and the durable value of utility rate-based assets during and after a reorganization, given the essential service provided and the high replacement cost) will persist. Under our notching criteria, when assigning issue ratings to utility FMBs, we consider the limitations of FMB issuance under the utility's indenture relative to the value of the collateral pledged to bondholders, management's stated intentions on future FMB issuance, and the regulatory limitations on bond issuance.

FMB ratings can exceed a utility's corporate credit rating by as much as one notch in the 'A' category, two notches in the 'BBB' category, and three notches in speculative-grade categories. (See "Changes To Collateral Coverage Requirements For '1+' Recovery Ratings On U.S. Utility First Mortgage Bonds," published Sept. 6, 2007.) Pennsylvania-American Water's collateral coverage of greater than 1.5x supports a recovery rating of '1+' and an issue rating of 'A', two notches above the corporate credit rating.

## Outlook

The outlook on Pennsylvania-American Water reflects the outlook on AWW. The stable outlook on AWW and AWCC reflects our expectation that the company will receive supportive rate increases over the next three years to address rising costs and increased capital spending plans. The current rating can accommodate some acquisitions, assuming management funds the acquisitions in a balanced manner. We could lower the rating if financial performance stalls or deteriorates, which could result from substantial debt-financing of capital expenditures or acquisitions, such that FFO to debt falls below 9% and debt to capital rises above 65%. We could also lower the rating if rate increases or allowed returns are set at levels substantially below the requested figures, and if the company takes significantly longer to resolve rate case filings than we currently expect. We could raise the rating if higher-than-expected rate increases or favorable cost recovery mechanisms allow for a sustained adjusted FFO to total debt ratio of 12% to 14% and adjusted leverage between 50% and 55%.

## Related Criteria And Research

- Top 10 Investor Questions: U.S. Investor-Owned Water Companies, published Jan. 25, 2010
- Industry Report Card: U.S. Investor-Owned Water Utilities Continue to Display Rating Stability, published Jan. 12, 2010
- Criteria: Key Credit Factors: Business And Financial Risks In the Investor-Owned Utilities Industry, published Nov. 26, 2008

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# Global Credit Portal<sup>®</sup>

## RatingsDirect<sup>®</sup>

January 30, 2012

### Summary:

## New Jersey-American Water Co.

#### Primary Credit Analyst:

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### Table Of Contents

---

Rationale

Outlook

Related Criteria And Research

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1

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## Summary:

# New Jersey-American Water Co.

**Credit Rating:** BBB+/Stable/–

## Rationale

The ratings on New Jersey-American Water Co. reflect the consolidated credit quality of parent American Water Works Co. Inc. (AWW). New Jersey-American accounts for 25% of AWW's revenues and about 30% of cash flow. New Jersey-American's favorable regulatory environment, strong services territory, stable and mostly residential customer base, absence of competition, and low operating risk support the utility's stand-alone excellent business risk profile. New Jersey-American Water's regulator, the New Jersey Board of Public Utilities, reviews rate cases based on a historical test year with adjustments, and allows a consolidated rate structure and recovery of purchased water costs. In addition, the company has proposed the addition of infrastructure capital spending to rate base outside of traditional rate proceedings in its current rate filing.

A favorable competitive position, a diverse and supportive regulatory environment, and a stable, above-average service territory support AWW's excellent business risk profile. AWW's regulatory framework includes reasonably allowed returns on equity and various cost-recovery mechanisms, including incentives for infrastructure improvements. The company's geographic diversity provides it with some market, cash-flow, and regulatory diversification. We view AWW's operating risks associated with its nonregulated operations as fairly low. AWW's aggressive financial profile, elevated capital-spending requirements for infrastructure replacement, increased costs of compliance with water quality standards, and the company's reliance on acquisitions to provide growth partly offset these strengths.

AWW provides regulated water and wastewater services to about 3.3 million customers in 18 states. The company's regulated utility subsidiaries represent about 89% of total revenues, but have provided more than 95% of adjusted EBITDA for the past three years. The company's nonregulated subsidiaries engage in water and wastewater facility management and maintenance, as well as design and construction consulting services related to water and wastewater plants. We view these nonregulated segments as having modest incremental risk for AWW, due to their lack of cash flow contribution and modest expected capital requirements.

A state commission regulates each of AWW's regulated subsidiaries, which supports revenue and cash flow stability. The average allowed return on equity (ROE) in AWW's seven largest jurisdictions, which account for about 80% of consolidated revenues, is about 10%. This is similar to the average allowed ROE in the water sector. In a number of jurisdictions, which represent about 50% of consolidated revenues, the utility recovers replacement capital spending between rate cases up to a stated percentage. The importance of infrastructure surcharge mechanisms has increased, given AWW's capital program of about \$1 billion per year. Certain states also allow for surcharges related to the cost of power, chemicals, and purchased water. For the next few years, we expect AWW to file additional rate cases and request additional recovery mechanisms to cover rising operating costs, capital expenditures, and pension and other postretirement obligations.

The U.S. Environmental Protection Agency believes that infrastructure replacement needs for water systems are significant over the next 20 years. AWW estimates that it will need to spend about \$1 billion annually in each of the

*Summary: New Jersey-American Water Co.*

next three years for replacement of infrastructure, new facilities to comply with water quality standards, and projects to enhance reliability, quality of service, and efficiency. AWW's reliability of supply is high, as the company owns a substantial number of treatment facilities for surface and groundwater treatment, and the majority of supply comes from surface and groundwater. In 2011, surface water provided 65% of the company's water supply, groundwater 28%, and it purchased about 7%.

Consolidated financial metrics are improving. In 2011, regulatory commissions granted AWW about \$118 million of general rate increases in various states including \$99 million in New Jersey, Pennsylvania, and Arizona; the company asks for rate increases to cover rising operating costs, capital expenditures, and pension and other postretirement obligations.

For the 12 months ended Sept. 30, 2011, AWW's adjusted funds from operations (FFO) totaled \$895 million. FFO to debt was 13.9%, which is acceptable for the rating. Total debt to capital remained around 60% during the same period. Substantially higher capital expenses are significant risks that may prevent adequate improvements to the company's financial profile. Over the next 12 months we expect FFO to improve slightly due to additional rate increases, although a sustained improvement in both consolidated FFO to debt and debt to total capital may not materialize, given the company's financing needs.

In March 2011, AWW announced that it has entered into an agreement to sell to EPCOR Water (USA) its regulated operations in Arizona and New Mexico for an estimated \$470 million. We view the transaction as marginally beneficial to AWW's business and risk profile, albeit not material enough to influence the outlook. AWW will use a portion of the sale proceeds to reduce debt (less than 5% of consolidated debt). Arizona and New Mexico are some of the relatively weaker and smaller states that AWW serves, totaling less than 5% of cash flows. Similarly, in July 2011, AWW announced the sale of its regulated operations in Ohio to Aqua America Inc. for \$120 million and a purchase of Aqua America's regulated operations in New York for about \$70 million. These announcements do not affect AWW's ratings.

#### **Liquidity**

The short-term ratings on AWW and AWCC are 'A-2'. We view the company's overall liquidity as adequate. For the upcoming 12 months, we expect liquidity sources to exceed uses by more than 1.2x. Cash sources consist of projected FFO of about \$900 million and revolver availability of \$259 million. As of Sept. 30, 2011 there were no borrowings outstanding on the revolvers. However, we discount the borrowing availability on the revolver by about \$425 million to account for commercial paper and other short-term borrowings and do not give credit to a portion of the credit facility that expires within the next 12 months. Cash uses consist of expected total capital spending of about \$1 billion in 2012, although mandatory and compliance-related expenses are only a fraction of that amount. Other cash uses include dividend distributions of about \$165 million, debt maturities of about \$34 million and pension plan contributions of about \$150 million. Other potential cash uses, such as working capital needs are not significant.

#### **Recovery analysis**

We rate New Jersey-American Water's first mortgage bonds (FMB) 'A', two notches above the corporate credit rating, based on a recovery rating of '1+' under our recovery methodology for regulated utilities. We assign recovery ratings to FMBs issued by U.S. utilities, and this can result in issue ratings being notched above the corporate credit rating on a utility, depending on the corporate credit rating category and the extent of the collateral coverage.

We base the investment-grade FMB recovery methodology on the ample historical record of nearly 100% recovery

*Summary: New Jersey-American Water Co.*

for secured-bond holders in utility bankruptcies and our view that the factors that supported those recoveries (the small size of the creditor class, and the durable value of utility rate-based assets during and after a reorganization, given the essential service provided and the high replacement cost) will persist. Under our notching criteria, when assigning issue ratings to utility FMBs, we consider the limitations of FMB issuance under the utility's indenture relative to the value of the collateral pledged to bondholders, management's stated intentions on future FMB issuance, and the regulatory limitations on bond issuance.

FMB ratings can exceed a utility's corporate credit rating by as much as one notch in the 'A' category, two notches in the 'BBB' category, and three notches in speculative-grade categories. (See "Changes To Collateral Coverage Requirements For '1+' Recovery Ratings On U.S. Utility First Mortgage Bonds," published Sept. 6, 2007.) New Jersey-American Water's collateral coverage of greater than 1.5x supports a recovery rating of '1+' and an issue rating of 'A', two notches above the corporate credit rating.

## Outlook

The outlook on New Jersey-American Water reflects the outlook on AWW. The stable outlook on AWW and AWCC reflects our expectation that the company will receive supportive rate increases over the next three years to address rising costs and increased capital spending plans. The current rating can accommodate some acquisitions, assuming management funds the acquisitions in a balanced manner. We could lower the rating if financial performance stalls or deteriorates, which could result from substantial debt-financing of capital expenditures or acquisitions, such that FFO to debt falls below 9% and debt to capital rises above 65%. We could also lower the rating if rate increases or allowed returns are set at levels substantially below the requested figures, and if the company takes significantly longer to resolve rate case filings than we currently expect. We could raise the rating if higher-than-expected rate increases or favorable cost recovery mechanisms allow for a sustained adjusted FFO to total debt ratio of 12% to 14% and adjusted leverage between 50% and 55%.

## Related Criteria And Research

- Top 10 Investor Questions: U.S. Investor-Owned Water Companies, published Jan. 25, 2010
- Industry Report Card: U.S. Investor-Owned Water Utilities Continue to Display Rating Stability, published Jan. 12, 2010
- Criteria: Key Credit Factors: Business And Financial Risks In the Investor-Owned Utilities Industry, published Nov. 26, 2008



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January 30, 2012

### Summary:

## Golden State Water Co.

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### Table Of Contents

---

Rationale

Outlook

Related Criteria And Research

## Summary:

# Golden State Water Co.

**Credit Rating:** A+/Stable/--

## Rationale

Standard & Poor's Ratings Services' ratings on Golden State Water Co. (GSWC; A+/Stable/--) reflect the consolidated credit quality of parent American States Water Co. (AWR; A+/Stable/--). GSWC provides more than 80% of consolidated revenues. AWR's other subsidiary is American States Utility Services Inc. (ASUS; not rated), which provides unregulated water and wastewater services to third parties.

GSWC's "excellent" (as our criteria define the term) business risk profile is characterized by a supportive regulatory environment; the absence of competition; strong, largely residential markets; and relatively low operating risk. Increased capital requirements associated with infrastructure-replacement needs, compliance with water-quality standards, and limited control of future water supply somewhat temper company strengths.

The California Public Utilities Commission (CPUC) regulates GSWC. We view California as having a constructive regulatory environment for water companies. The CPUC has granted a number of supportive cost-recovery mechanisms that allow water utilities to generate stable cash flows and recover costs with minimal regulatory lag. Some of these supportive mechanisms include the decoupling of throughput from revenues and recovery of costs associated with reduced usage due to conservation. In addition, the CPUC allows the utility to recover its capital investments between rate cases and passes all purchased-water costs through to customers. We expect regulatory conditions in California to become somewhat stricter as a result of the 2010 pipeline explosion in San Bruno, Calif. On Nov. 2, 2011, the CPUC Division of Ratepayer Advocates (DRA) proposed a settlement authorizing a return on equity (ROE) of 9.99%, slightly below the 10% industry standard. We expect the final approved amount to be finalized by first-quarter 2012. On July 21, 2011, GSWC filed a general rate case for rate increases of approximately \$31.3 million in annual revenues. The proposed rate increases for 2014 are \$9.1 million, and the 2015 proposed rate increases amount to \$11.5 million. These rates will be effective in January 2013.

We view the water supply situation that the company must deal with in California as challenging. California struggles with droughts and a lack of water supply as two of the company's wholesale water suppliers have restricted the amount of water available to the company. AWR purchases 40% to 45% of its water supplies, which is a similar amount to other rated water utilities in California, such as California Water Service Co. (A+/Negative/--) and San Jose Water Co. (A/Stable/--). GSWC implemented a plan to reduce consumption by 10% through voluntary actions in service areas that the Metropolitan Water District of Southern California supplies, based on the district's Water Supply Allocation Plan. The company met the required reduction for the 2010 water year.

Bear Valley Electric Service (BVES; not rated), a division of GSWC, provides electric services to the city of Big Bear Lake and adjoining areas. This segment contributes less than 10% of consolidated EBITDA. Given its size and relative contribution to EBITDA, the operations at BVES do not materially affect AWR's credit quality.

The company's nonregulated segment, ASUS, provides operations, maintenance, and construction services to water and wastewater facilities. Despite tight margins and low cash flow, these nonregulated operations pose limited

*Summary: Golden State Water Co.*

incremental risks to the company's consolidated credit profile. In addition to the complementary nature of the utility's nonregulated segment to its regulated operations, the fact that the contracts use a cost-of-service structure, shielding AWR from the majority of costs, mitigates risks. We expect AWR's nonregulated operations, which represent about 10% of operating income, to remain a relatively small cash flow contributor.

AWR's "intermediate" (as our criteria define the term) risk financial profile is characterized by cash flow and leverage ratios that are adequate for the rating. We expect adjusted metrics to remain somewhat stable, with funds from operations (FFO) to debt above 25% and debt to capital below 55%, with continued rate relief for capital spending and pension and postretirement obligations. As of Sept. 30, 2011, AWR had total adjusted debt of about \$395 million, with adjusted debt to capital of 49%. For the 12 months ended Sept. 30, 2011, adjusted (FFO) totaled about \$129 million, with adjusted FFO to interest coverage level of 5.8x, and adjusted FFO to total debt of 33%.

#### **Liquidity**

We view AWR's overall liquidity as "strong" (as our criteria define the term). For the next 12 months we expect liquidity sources to exceed uses by about 2x. Cash sources consist of projected FFO of about \$120 million, revolver availability of \$83 million, and cash of about \$5 million. Cash uses consist of projected FFO of about \$120 million, revolver availability of \$83 million, and cash of about \$5 million. Cash uses consist of expected capital spending of about \$80 million and distributions of about \$20 million. Other potential cash uses, such as debt maturities and working capital needs, are not significant.

In absolute dollars, we expect cash sources to exceed uses by roughly \$105 million over the next 12 months. This difference will remain positive even if EBITDA falls by more than 30%, which we would not anticipate given the company's regulated cash flows. In terms of other qualitative factors, we believe that the company has considerable access to the capital markets through state and local development funds and equity markets. Similar to most water companies, we don't expect AWR's FFO to sufficiently cover its cash requirements in the near-term.

#### **Outlook**

The stable outlooks on AWR and GSWC reflect our expectation that the regulatory environment in California will continue to be supportive and financial metrics will remain in line with the rating. We expect the company to continue to raise capital in a balanced manner to address rising costs and increased capital spending plans. The current rating can accommodate some acquisitions, assuming management funds the acquisitions in a balanced manner. We could lower the rating if financial performance stalls or deteriorates, which could result from substantial debt financing of capital spending or acquisitions, such that FFO to debt falls below 20% and debt to capital rises above 55% for a sustained period. We do not expect to raise the ratings in the near term.

#### **Related Criteria And Research**

Key Credit Factors: Business And Financial Risks In The Investor-Owned Utilities Industry, Nov. 26, 2008

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The McGraw Hill Companies

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September 30, 2011

### Summary:

## Aqua Pennsylvania Inc.

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### Table Of Contents

---

Rationale

Outlook

Related Criteria And Research

## Summary:

# Aqua Pennsylvania Inc.

**Credit Rating:** A+/Stable/--

## Rationale

The ratings on water utility Aqua Pennsylvania Inc. reflect the consolidated credit quality of its parent company, Aqua America Inc. (unrated). Aqua Pennsylvania accounts for more than one-half of consolidated Aqua America's revenues and cash flow.

Aqua Pennsylvania's excellent business risk profile reflects a low-risk monopoly water distribution business; a supportive regulatory environment with favorable cost-recovery mechanisms that enhance cash flow predictability; a large, stable residential and commercial customer base that provides a stable revenue base; and solid operations in which purchased water accounts for only about 10% of water sales. The company's elevated capital spending requirements for infrastructure replacement, increasing costs of compliance with water quality standards, and a highly acquisitive growth strategy somewhat temper the company's strengths. We view the financial risk profile as intermediate, reflecting stable but weak cash flow metrics, high debt leverage, and solid access to the capital markets.

The Pennsylvania Public Utility Commission (PPUC) provides Aqua Pennsylvania with favorable cost-recovery mechanisms, including the addition of capital spending to rates outside the traditional rate proceedings, inclusion of certain expected expenditures in determining rates, and a consolidated rate structure. During 2010, 24 rate cases worth about \$50 million were processed across several of Aqua America's subsidiaries. A number of rate cases continue to be in progress. For 2011, we expect rate cases worth about \$40 million to be processed.

Timely rate relief and balanced financing of its growth strategy support Aqua Pennsylvania's intermediate financial profile, which we view as appropriate for the rating, but consolidated financial metrics are modestly weaker than other 'A+' rated water companies. As of June 30, 2011, Aqua America had total debt, including tax-effected pension and other post-employment benefits and operating leases, of about \$1.78 billion, with total debt to capital of about 60%. Aqua America reported funds from operations (FFO) of \$362 million and FFO to debt of 20.4%. As of June 30, 2011, Aqua Pennsylvania had total adjusted debt of \$1.04 billion and FFO to total debt of 23.8%. Over the intermediate term, we expect financial performance to approximate current levels for both Aqua America and Aqua Pennsylvania, supported by additional rate increases and existing recovery mechanisms.

Aqua America recently entered into a joint venture with Penn Virginia Resource Partners L.P. (PVR, rated 'BB-/Stable/--') to construct a 12-inch pipeline to provide fresh water to PVR's gas-gathering systems in Lycoming County, Pa. We believe that this project fulfils a requirement to provide water in the Marcellus Shale region in an efficient way and could provide Aqua with an opportunity to increase its nonregulated cash flows, which are currently less than 1% of total EBITDA.

## Liquidity

We consider Aqua America's consolidated liquidity to be adequate under Standard & Poor's corporate liquidity methodology. Projected sources of liquidity (cash, FFO, and credit facility availability) exceed projected uses

*Summary: Aqua Pennsylvania Inc.*

(maintenance and significant discretionary capital spending, dividends, and manageable debt maturities) by about 1.5x over the next 12 months. We base this calculation on a scenario where the company has no access the capital markets, and excludes any uncommitted facilities. (see "Methodology And Assumptions: Liquidity Descriptors For Global Corporate Issuers," published Sept. 28, 2011) Over the next 12 months, we expect Aqua America's reported cash from operations to be in the \$340 million to \$370 million range, in line with recent growth. Other sources of funds also include minimal cash from expected rate cases in 2011 and some borrowing ability on the revolving credit facility. Uses of cash include capital spending that we expect to be in the \$300 million to \$350 million range, although we consider only about one-third of it is mandatory expenditure. Debt maturities of about \$28 million, and expected dividends of about \$83 million, in line with increases over the past few years, are other significant uses of capital.

Aqua Pennsylvania issued about \$143 million of debt in October 2010, a portion of which it will likely use to refinance existing debt. The company will deposit proceeds from the incremental debt in a restricted account and use it to fund capital spending over the next few years. These funds, in addition to infrastructure replacement surcharges, support spending on discretionary projects.

There is also significant covenant headroom under its debt agreements. With total debt to capital (as defined) of 58% as of June 30, 2011, compared with the requirement to maintain leverage below 62%, and interest coverage (as defined) of 3.6x compared with the minimum level of 1.8x, the company is comfortably in compliance with its financial covenants.

**Recovery analysis**

We rate Aqua Pennsylvania's first mortgage bonds (FMB) 'AA-', one notch higher than the corporate credit rating, based on a recovery rating of '1+' under our recovery methodology for regulated utilities. We assign recovery ratings to FMBs issued by U.S. utilities, and this can result in issue ratings being notched above the corporate credit rating on a utility, depending on the corporate credit rating category and the extent of the collateral coverage. We base the investment-grade FMB recovery methodology on the ample historical record of nearly 100% recovery for secured-bond holders in utility bankruptcies and our view that the factors that supported those recoveries (the small size of the creditor class, and the durable value of utility rate-based assets during and after a reorganization, given the essential service provided and the high replacement cost) will persist. Under our notching criteria, when assigning issue ratings to utility FMBs, we consider the limitations of FMB issuance under the utility's indenture relative to the value of the collateral pledged to bondholders, management's stated intentions on future FMB issuance, and the regulatory limitations on bond issuance. FMB ratings can exceed a utility's corporate credit rating by as much as one notch in the 'A' category, two notches in the 'BBB' category, and three notches in speculative-grade categories. (See "Changes To Collateral Coverage Requirements For '1+' Recovery Ratings On U.S. Utility First Mortgage Bonds," published Sept. 6, 2007.) Aqua Pennsylvania's collateral coverage of greater than 1.5x supports a recovery rating of '1+' and an issue rating of 'AA-', one notch higher than the corporate credit rating.

**Outlook**

The stable outlook reflects Standard & Poor's expectation of adequate and timely rate relief, management of the company's growth strategy, and maintenance of an appropriate financial risk profile. We could lower the rating if the regulatory environment in Pennsylvania takes an unfavorable shift or the company increases debt to finance

*Summary: Aqua Pennsylvania Inc.*

acquisitions or capital spending, resulting in consolidated FFO to debt consistently below the 17% to 18% range and leverage above 60%. Although less likely, we could raise the rating if regulators provide significant rate increases and above-average returns on equity that result in Aqua America's generating cash flow that is materially stronger than we expect, with FFO to debt of at least 25% and leverage below 55%.

## **Related Criteria And Research**

Criteria: Key Credit Factors: Business And Financial Risks In the Investor-Owned Utilities Industry, Nov. 26, 2008



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January 30, 2012

### Summary:

## United Waterworks Inc.

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### Table Of Contents

---

Rationale

Outlook

Related Criteria And Research

## Summary:

# United Waterworks Inc.

**Credit Rating:** A-/Stable/-

## Rationale

The ratings on Wilmington, Del.-based water supplier United Waterworks Inc. (UWW) and Harrington Park, N.J.-based water supplier United Water New Jersey Inc. (UWNJ) reflect the consolidated credit profile of Harrington Park, N.J.-based parent United Water Resources (UWR; not rated). UWNJ and UWW account for around 90% of UWR's consolidated revenues and 85% of consolidated funds from operations (FFO). Suez Environnement (not rated) indirectly owns UWR through United Water Inc. (not rated).

UWNJ's and UWW's stand-alone business risk profiles are excellent, reflecting a favorable regulatory environment, no retail competition in their service territories, geographic diversity, largely residential markets, and low operating risk. Reliance on Suez Environnement for periodic capital infusions to fund capital-spending requirements for infrastructure replacement and increasing compliance costs with water-quality standards somewhat temper the company's strengths. Even though UWR gets only about 6% of its cash flows from nonregulated operations, we view these nonregulated operations, which consist of managing and maintaining municipal water and wastewater facilities, as having modest incremental risk, due to their low profit-margin volatility and modest expected capital requirements.

State commissions oversee UWR's regulated operations, and supporting revenue and cash flow stability. UWR serves more than two million people across eight states, which mitigates some of the effects of adverse weather patterns and the regulatory climate of any particular state. Many of the company's operations benefit from cost-recovery mechanisms to recover capital spending outside of traditional rate proceedings, rate cases based on a future test year, and a consolidated rate structure. Adding to revenue and cash flow stability, the company's residential and commercial customers provide a vast majority of total revenues.

UWNJ's and UWW's financial risk profile is significant. Financial measures are weak for the significant categorization, but the low cash flow volatility inherent to the water utility operations allow for more aggressive measures. We expect modest customer growth, and regulatory rate case proceedings to benefit cash flow over time. In 2011, various regulated subsidiaries of UWR received rate case increases of more than \$90 million. We expect this figure to be higher in 2012. As of Sept. 30, 2011, the company showed continued improvement in its financial metrics, with FFO to debt of 13.5% and debt to capital of about 59%. We expect financial metrics to remain appropriate for the rating, with consolidated debt to capital of about 60% and FFO to debt of about 11% to 13% over the next three years.

## Liquidity

Standard & Poor's bases its view of UWNJ's and UWW's liquidity on the consolidated liquidity of UWR. We view liquidity as adequate, under our corporate liquidity methodology. We expect liquidity sources will exceed projected uses by more than 1.2x during the next 12 months.

The primary sources of liquidity include internally generated cash flow, which we expect to be between \$120 million

*Summary: United Waterworks Inc.*

and \$140 million and a \$250 million revolving credit facility from Suez Environnement. Suez is an indirect parent of UWR and, given its prior history of capital infusion to UWR, its revenue of about €14 billion, more than €2 billion of EBITDA, and available credit facility of more than €1.8 billion as of Dec. 31, 2010, we believe it will have sufficient funding for the UWR revolver.

In 2012 we expect UWR's annual capital expenditures to increase to between \$150 million and \$200 million although mandatory and compliance-related expenses will be lower. Distribution of about \$25 million and insignificant debt maturities also constitute uses of liquidity. UWR has historically funded its discretionary spending with capital infusions from its parent company, Suez Environnement. Under most scenarios, we would expect this dynamic to continue.

## Outlook

The stable outlook reflects our expectation of adequate and timely rate relief and maintenance of the current financial profile. We could lower the ratings if the regulatory environment deteriorates or rate case decisions are significantly lower than those the company has requested, such that the company sustains FFO to debt below 10%. Large debt-financed acquisitions or any discontinuation of Suez Environnement's capital contributions could also lead to lower ratings. Although a positive outlook is unlikely in the near term, it could occur if financial leverage measures materially improve, with FFO to debt increasing to between 18% and 20% and the companies' debt to capital declining to the low-50% area for a sustained period of time.

## Related Criteria And Research

Criteria: Key Credit Factors: Business And Financial Risks In the Investor-Owned Utilities Industry, Nov. 26, 2008

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December 9, 2011

### Summary:

## San Jose Water Co.

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### Table Of Contents

---

Rationale

Outlook

Related Criteria And Research

## Summary: San Jose Water Co.

**Credit Rating:** A/Stable/--

### Rationale

Standard & Poor's Ratings Services' ratings on San Jose Water Co. reflect the consolidated credit profile of its unrated parent, SJW Corp. The ratings also reflect our assumption that economic conditions and reduced residential construction will keep customer growth relatively flat in the intermediate term. The utility serves approximately 230,000 customers in the San Jose region in California.

San Jose Water's excellent business risk profile stems from a supportive regulatory environment, a low-risk monopoly water-distribution business, and a strong, predominantly residential and commercial customer base that provides stable revenue. (For more on business risk and financial risk, see "Business Risk/Financial Risk Matrix Expanded," published on May 27, 2009, on RatingsDirect.) Capital requirements associated with infrastructure replacement needs, increasing costs of compliance with water-quality standards, lack of geographic diversity, and limited control of future water supply somewhat temper the strengths.

The California Public Utilities Commission (CPUC) regulates San Jose Water, and has granted a number of supportive cost-recovery mechanisms to allow it to generate stable cash flows and recover costs with minimal regulatory lag. Regulatory mechanisms allow San Jose Water to recover higher costs and lower revenues between rate cases, including purchased water expense, purchased power expense, and pension expense, among others. The CPUC has also allowed San Jose Water to track lost revenue and incurred expenses from conservation efforts through its water-revenue adjustment mechanism. The commission allows for forward-looking test years, which provides for recovery of anticipated infrastructure projects. Regulatory conditions in California have become somewhat stricter as a result of the pipeline explosion in San Bruno, Calif., earlier this year. The CPUC Division of Ratepayer Advocates proposed a settlement authorizing a return on equity (ROE) of 9.99%, a 20 basis point decline and below the 10% industry standard. The final approved amount is expected to be finalized by first-quarter 2012. San Jose Water has approved rate increases in 2011 and 2012 of \$7.3 million and \$11.1 million, respectively. We expect the company to file its next rate case in California in January 2012 for rates effective Jan. 1, 2013. The utility is expected to include a full water revenue adjustment mechanism and modified cost balance account in the next general rate case to offset conservation.

San Jose Water benefits from better-than-average demographics in its markets. Residential and business customers account for about 92% of revenues, providing a stable and predictable revenue base. The company purchases about 50% of its water supply and receives 40% from groundwater. We believe that infrastructure improvement and replacement will allow the company to treat more surface water in the future, which could reduce its reliance on the Santa Clara Valley Water District.

We consider San Jose Water to have an intermediate financial risk profile. For the 12 months ended Sep. 30, 2011, credit metrics at SJW Corp. were adequate for the rating, with funds from operations (FFO) to adjusted debt coverage of about 16% and FFO interest coverage of 3.9x. SJW had total adjusted debt of about \$390 million, and a high debt to capital ratio of 60%. We expect the FFO to debt ratio to increase to remain in the 15%-18% range,

*Summary: San Jose Water Co.*

and the debt to capital ratio should be 50%-55% in the long term, which is in line with the rating, as a result of the recently approved rate requests. However, as is the case for most water companies, San Jose Water's cash from operations is not likely to cover the company's various cash requirements sufficiently. It will need external financing to fund its capital needs through 2013, which include high capital spending to upgrade a water-treatment facility and to replace infrastructure. We expect SJW to maintain its balanced capital structure as it funds the cash flow deficit with debt issues, equity offerings, regulatory surcharges, and rate increases.

#### **Liquidity**

Due to the potential cash flow movement within the corporate structure, we analyze San Jose Water's liquidity position on a consolidated basis. Under our corporate liquidity methodology, we consider San Jose Water's liquidity to be adequate. For the upcoming 12 months, we expect liquidity sources to exceed uses by roughly 1.2x. Cash sources consist of projected FFO of roughly \$60 million during the next 12 months, and \$43 million of cash as of Sept. 30, 2011. We expect uses during the next 12 months to include capital expenditures of \$70 million and dividends of \$15 million. If cash flows were to decline, San Jose Water could reduce capital spending on its discretionary capital projects. The \$85 million in credit facilities will mature on June 1, 2012, as such the liquidity will be constrained if these are not renewed in the near-term.

#### **Outlook**

The stable outlook on the rating reflects our expectations for continued supportive regulation in California and on solid consolidated financial metrics. We expect credit metrics to remain appropriate for the 'A' category, with an FFO to debt ratio of 15%-18%. We could lower the rating if there is an unfavorable shift in regulatory conditions or if credit metrics deteriorate such that the FFO to debt ratio remains sustained at less than 15%. Although we do not expect to do so in the near term, we could raise the rating if rate increases and returns on equity are sufficient to achieve a consistent FFO to debt ratio of 20% or higher and a debt to capital ratio of less than 50% for a sustained period.

#### **Related Criteria And Research**

Key Credit Factors: Business And Financial Risks In the Investor-Owned Utilities Industry, Nov. 26, 2008

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December 7, 2011

### Summary:

## The Baton Rouge Water Works Co.

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### Table Of Contents

---

Rationale

Outlook

Related Criteria And Research

## Summary:

# The Baton Rouge Water Works Co.

**Credit Rating:** A+/Stable/-

## Rationale

Standard & Poor's Ratings Services' ratings on regulated water utility Baton Rouge Water Works Co. (BRWW) reflect its excellent business profile and intermediate financial risk profile. BRWW's excellent business risk profile reflects a low-risk monopoly water distribution business, a supportive regulatory environment with favorable cost-recovery mechanisms that enhance cash flow predictability, a mostly residential and commercial customer base that provides stable revenues, and solid operations. Tempering these strengths are the company's small size and geographic concentration. Utility Holdings Inc. (UHI) owns about 84% of BRWW, with a number of investors across the country owning the rest.

On a consolidated basis, UHI's net operating income was about \$9.7 million as of Dec. 31, 2010, with BRWW contributing about 83% and Louisiana Water Co. contributing the remaining percentage. BRWW's cash flows come from four entities, and its own regulated operations contribute about 60% of cash flows. Its unrated subsidiaries Parish Water Co. (which has its own subsidiary, Ascension Water Co.) and Utility Properties Inc. contribute the remaining percentage.

The Louisiana Public Service Commission's (LPSC) regulatory framework is key to revenue stability. BRWW has a good relationship with the commission, which has awarded it significant rate case increases. Recent rate cases have averaged more than 90% of requested amounts. In the most recent rate case, in April 2009, the LPSC approved a \$2.5 million increase in revenues (about 85% of the company's request) and maintained the allowed return on equity of 12.5%. In Parish Water's rate case that was settled in April 2010, the LPSC approved a revenue increase of \$1.3 million (about 9.4%). The commission approved a 9.8% return on rate base. Ascension Water, which serves Ascension Parish and provides about 10% of consolidated operating income, received an increase of \$1.4 million in January 2008 (100% of the company's request). The companies requested the rate increases to address rising operating costs and capital spending to improve infrastructure.

BRWW obtains its water supply from nine separate aquifers, which are of superior quality and are more than adequate to meet customer needs. The company has maintained its infrastructure to meet customer demand, including building a water transmission line to the high-growth areas of Ascension Parish and southern Baton Rouge. In addition, the company's water-treatment costs are among the lowest of its peers', which enables it to maintain strong cash flows even though its tariffs are below the state average. Louisiana Water operates six water distribution systems in six towns near Baton Rouge. The quality of water from its sources is not as good and requires some treatment.

BRWW benefits from good markets and solid operations. However, the company's small size and geographic concentration somewhat moderate its strengths. Residential customers account for about 95% of revenues, providing a predictable revenue base. Over the past several years, the company has benefitted from annual double-digit growth in Ascension Parish, one of the fastest-growing communities in the region. Given the concentration of the company's operations in Louisiana, the company is strongly affected by the state's regulatory



*Summary: The Baton Rouge Water Works Co.*

framework and local weather conditions. Population growth, which benefitted significantly from the dislocation of New Orleans residents following the 2005 hurricanes, has started to moderate over time as dislocated residents may be looking to return to New Orleans. Baton Rouge's reliance on cyclical industries makes it slightly susceptible to the general economic decline. We expect customer growth over the next few years to more closely reflect the nationwide economic slowdown.

We consider both the consolidated and stand-alone credit profiles of UHI and BRWW when assessing the ratings on BRWW. BRWW's intermediate financial risk profile reflects our belief that the utility will be able to maintain robust and reliable cash flows and a conservative capital structure. BRWW maintains between 40% and 50% of balance sheet debt in cash and marketable securities, which strengthens its financial profile. As of Sept. 30, 2011, BRWW had total debt (including capitalized operating leases and tax-effected pension and postretirement obligations) of about \$51 million and adjusted funds from operations (FFO) of \$17.6 million, with adjusted debt to capital at about 43%, FFO interest coverage of 6.5x, and adjusted FFO to total debt of about 34%. We expect these credit metrics to remain around these figures in 2012. Credit metrics at the UHI are considerably weaker, with FFO to debt of about 22.8% and debt to capital of 57% after our adjustments.

**Liquidity**

Under Standard & Poor's corporate liquidity methodology, we consider BRWW's liquidity to be strong. We project sources of liquidity (cash on hand and FFO) to exceed uses (relatively modest maintenance and discretionary capital spending, dividends, and minimal debt maturities) by more than 1.7x over the next 12 months. (For more on liquidity, see "Methodology And Assumptions: Liquidity Descriptors for Corporate Issuers", published Sept. 28, 2011, on RatingsDirect. As of Sept. 30, 2011, BRWW reported cash from operations of \$17.6 million. Over the next few years, we expect cash flows to benefit from modest customer growth. Although BRWW does not maintain access to a revolving credit facility, it generally maintains cash balances of around \$20 million. As of Sept. 30, 2011, BRWW had about \$25 million of cash and marketable securities. We expect capital spending, which has been between \$11 million and \$15 million over the past several years, and distributions of around \$7 million per year, to continue at these levels, which approximate the company's internal cash flow. On a consolidated basis, the liquidity at UHI is slightly weaker, but sources exceed uses by more than 1.5x as of Sept. 30, 2011, which we consider to be in the strong category.

**Recovery analysis**

We rate BRWW's first mortgage bonds (FMB) 'AA-', one notch higher than the corporate credit rating, based on a recovery rating of '1+' under our recovery methodology for regulated utilities.

We assign recovery ratings to FMBs issued by U.S. utilities, and this can result in issue ratings that are notched above the corporate credit rating on a utility, depending on the corporate credit rating category and the extent of the collateral coverage. We base the investment-grade FMB recovery methodology on the ample historical record of nearly 100% recovery for secured-bond holders in utility bankruptcies and on our view that the factors that supported those recoveries (the small size of the creditor class, and the durable value of utility rate-based assets during and after a reorganization, given the essential service provided and the high replacement cost) will persist. Under our notching criteria, when assigning issue ratings to utility FMBs, we consider the limitations of FMB issuance under the utility's indenture relative to the value of the collateral pledged to bondholders, management's stated intentions on future FMB issuance, and the regulatory limitations on bond issuance. FMB ratings can exceed a utility's corporate credit rating by as much as one notch in the 'A' category, two notches in the 'BBB' category, and three notches in speculative-grade categories. (See "Changes To Collateral Coverage Requirements For '1+'

*Summary: The Baton Rouge Water Works Co.*

Recovery Ratings On U.S. Utility First Mortgage Bonds," published Sept. 6, 2007.) BRWW's collateral coverage of more than 1.5x supports a recovery rating of '1+' and an issue rating of 'AA-', one notch above the corporate credit rating.

## Outlook

The stable outlook reflects Standard & Poor's expectation of supportive regulation and stable financial performance that approximates current levels. We could lower the rating if infrastructure investments require significant capital spending or unfavorable weather significantly reduces water consumption levels such that FFO debt coverage falls below 25% at BRWW or below 20% at UHI for a sustained period. We could also lower the rating if UHI's debt leverage increases or if BRWW changes its policy of maintaining a large cash balance. We could raise the rating if the company's asset diversity improves or its size increases, which we do not expect to occur in the near term.

## Related Criteria And Research

- Business Risk/Financial Risk Matrix Expanded, May 27, 2009
- Changes To Collateral Coverage Requirements For '1+' Recovery Ratings On U.S. Utility First Mortgage Bonds, Sept. 6, 2007

**PMA-9**

Prepared Testimony of  
***Robert F. Powelson***  
Chairman  
Pennsylvania Public Utility Commission

*before the*  
Pennsylvania House of Representatives  
Consumer Affairs Committee

April 28, 2011



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Chairman Godshall, Chairman Preston, members of the Committee, I appreciate the opportunity to speak with you today about House Bill 1294. This legislation will give the Pennsylvania Public Utility Commission (PUC) the authority to allow utilities to recover in a timelier manner the capital costs associated with investments in infrastructure. The bill also allows water and wastewater utilities to combine the revenue requirements used to determine rates. For the reasons discussed below, the PUC supports the passage of this legislation.

While the ratemaking model currently employed at the PUC has worked relatively well for many decades, it does not adequately address the challenges we face today or going forward. In Pennsylvania, and across the nation, much of our utility infrastructure is over 70 years old. Replacing this infrastructure – from gas pipelines, to electric transmission lines, to wastewater collection systems – is extremely expensive. However, for both safety and reliability reasons, many of Pennsylvania's aging pipes and wires should soon be replaced. While many utilities are accelerating their infrastructure replacement schedules to address this challenge, replacing Pennsylvania's aging utility infrastructure remains a massive and expensive undertaking.

Even though utilities are investing significant amounts of money to replace and repair their physical infrastructure, the existing ratemaking methodology used by the PUC does not allow utilities to recover these costs in a timely manner. Utility ratemaking is founded upon the relationship between revenues, operating expenses, and investment (or rate base). Historically, utility companies counted on revenues increasing and

expenses decreasing as they became more efficient. Utilities could also assume that their rate base would grow, at least in partial relationship, to revenues. Times are different today.

Utilities are seeing their revenues decrease. Energy efficiency measures such as Act 129, while achieving their stated goals, are encouraging less consumption per customer, which means less revenue for utilities. With respect to expenses, while there is always room for increased efficiencies and innovation, most utilities have already taken numerous steps to reduce expenses and increase productivity. At the same time, utilities have seen rate base increase because infrastructure replacement generally does not generate a single dollar of new revenue. Thus, while utilities' revenues are decreasing, their expenses and rate base are increasing.

In order to ensure the continued safety and reliability of our utility system, it is essential that the PUC and the Legislature help Pennsylvania's utilities resolve the problem of aging infrastructure in our state. House Bill 1294 will do this by allowing the PUC to consider new ratemaking methods that will better address the challenges the utility industry faces today. By reducing regulatory lag and incenting investment in infrastructure, this legislation will ensure that the utility infrastructure in the Commonwealth will be updated in an expeditious manner, resulting in a safer and more reliable utility system.

One of the alternative ratemaking methods House Bill 1294 would allow the PUC to consider is the use of a fully projected future test year. Traditionally, when a utility

wants to increase its rates, it files a rate case with the PUC using a test year comprising of the utility's revenues and expenses during the 12-month period immediately following an historic test year. Ideally, a test year should reflect as closely as possible the conditions the utility will face when the rates being established will be in effect. However, the test year the PUC currently uses almost always results in "regulatory lag" because, by the time the rates go into effect at the conclusion of the rate case, the information relied upon from the test year is outdated.

House Bill 1294 would instead allow utilities to use, with the PUC's approval, a fully projected future test year. Under this approach, utilities' rates and costs will match the first year new rates are in effect. This will significantly reduce regulatory lag and will encourage less frequent base rate case filings, saving utilities and customers millions in rate case expenses.

Another alternative ratemaking method that House Bill 1294 would allow the PUC to consider is an automatic adjustment charge that enables utilities to recover certain infrastructure improvement costs between base rate cases through a surcharge on customers' bills. This surcharge is often called a Distribution System Improvement Charge (DSIC) by the water and natural gas industry, and a Collection System Infrastructure Charge (CSIC) by the wastewater industry. These surcharges ensure the least possible rate impact on customers by spreading out over time the cost of replacing and enhancing Pennsylvania's utility infrastructure.

Pennsylvania implemented the DSIC for the water industry in 1997. Over the past fourteen years, the DSIC has had substantial impact on accelerating water infrastructure replacement in Pennsylvania. Prior to the DSIC, Pennsylvania American Water Company (PAWC) projected that it would take about 225 years to upgrade its entire system. With DSIC, the projected amount of time for upgrades to the PAWC distribution system is about 117 years – a timeframe that more closely matches the expected service life of the system.

Pennsylvania was the first state in the nation to enact and use the DSIC, and since that time, it has become a national “best practice.” Seven other states have now adopted mechanisms similar to Pennsylvania’s water DSIC. Due to in large part to the DSIC, the PA PUC was recognized by Standard & Poor’s for effectively encouraging water company investment in infrastructure improvements. The DSIC has also been recognized in a resolution passed by the National Association of Regulatory Utility Commissioners (NARUC) as a national best practice regulatory tool. In addition, the Council of State Governments included DSIC in its model legislation. The DSIC is one of the most important regulatory tools of the past decade and it was created in Pennsylvania.

Given the success Pennsylvania has had with the water DSIC, a logical next step is to expand the DSIC, or a similar ratemaking mechanism, to other sectors of the utility industry, such as the natural gas, electric, and wastewater sectors. Currently, there are approximately 11,000 miles of cast iron, unprotected bare steel, and even a small portion of wooden natural gas pipes in Pennsylvania that have reached or are reaching the end of



their useful lives. If left in place, these facilities will continue to deteriorate. Although I believe the natural gas transportation network in Pennsylvania as whole is very safe, the recent tragic events in Allentown and Philadelphia have proven that we must take every step possible to replace vulnerable pipelines.

Natural gas companies spend millions every year repairing, replacing and maintaining the pipelines. As explained above, the current process for recouping the costs of making these upgrades is insufficient and results in unnecessary delay. House Bill 1294 would allow utilities to request permission from the PUC to use a mechanism similar to DSIC to recoup the revenue needed to upgrade and improve the pipelines in a timely manner. This DSIC mechanism would allow natural gas companies the flexibility to perform safety upgrades without a lengthy process to approve the rates necessary to make the large capital investment, and would encourage companies to replace pipelines under an expedited schedule.

In addition, the DSIC and CSIC will provide ratepayers with improved service quality and greater rate stability. By replacing aging infrastructure at an accelerated pace, there will be fewer main breaks, less frequent service interruptions, increased safety, and lower levels of unaccounted for natural gas and wastewater. The DSIC saves costs, not only in reducing frequency of rate cases, but by incenting capital investment to replace aging infrastructure. The infrastructure replacement encouraged by the DSIC would also help create hundreds of jobs — utility positions and pipeline contractors — needed to support the infrastructure replacement program. In light of today's difficult financial

markets, DSIC and CSIC are the type of innovative regulatory policies expected as rating agencies tighten their ratings benchmarks and are a key element in maintaining access to capital markets on reasonable terms.

It is also important to note that under House Bill 1294, utilities will not be able to implement a DSIC or CSIC without PUC approval. When a utility seeks to implement a surcharge such as DSIC, these requests receive closer scrutiny and review than time allows during a base rate case. In addition, the PUC has many safeguards to ensure the DSIC is implemented appropriately. For example, the PUC caps the surcharge to a percent of the total utility bill and requires that all customers receive notice of any such rate change. In addition, the PUC performs annual reconciliation audits to ensure that over-collections are refunded with interest and under-collections are included in future rates without interest recovery. Finally, the PUC reduces the surcharge to zero if the utility is over-earning. Through these safeguards, the PUC will ensure the DSIC and other related surcharges are implemented in manner that protects and benefits customers.

House Bill 1294 would also permit utilities to combine the revenue requirements of water and wastewater operations. Recently, the cost of wastewater treatment and collection has risen exponentially. As a result, many wastewater utilities have been granted significant rate increases by the PUC, which, in many cases, have resulted in rate shock for customers. By allowing utilities that provide both water and wastewater services to combine their revenue requirements, this will spread the increasing costs of

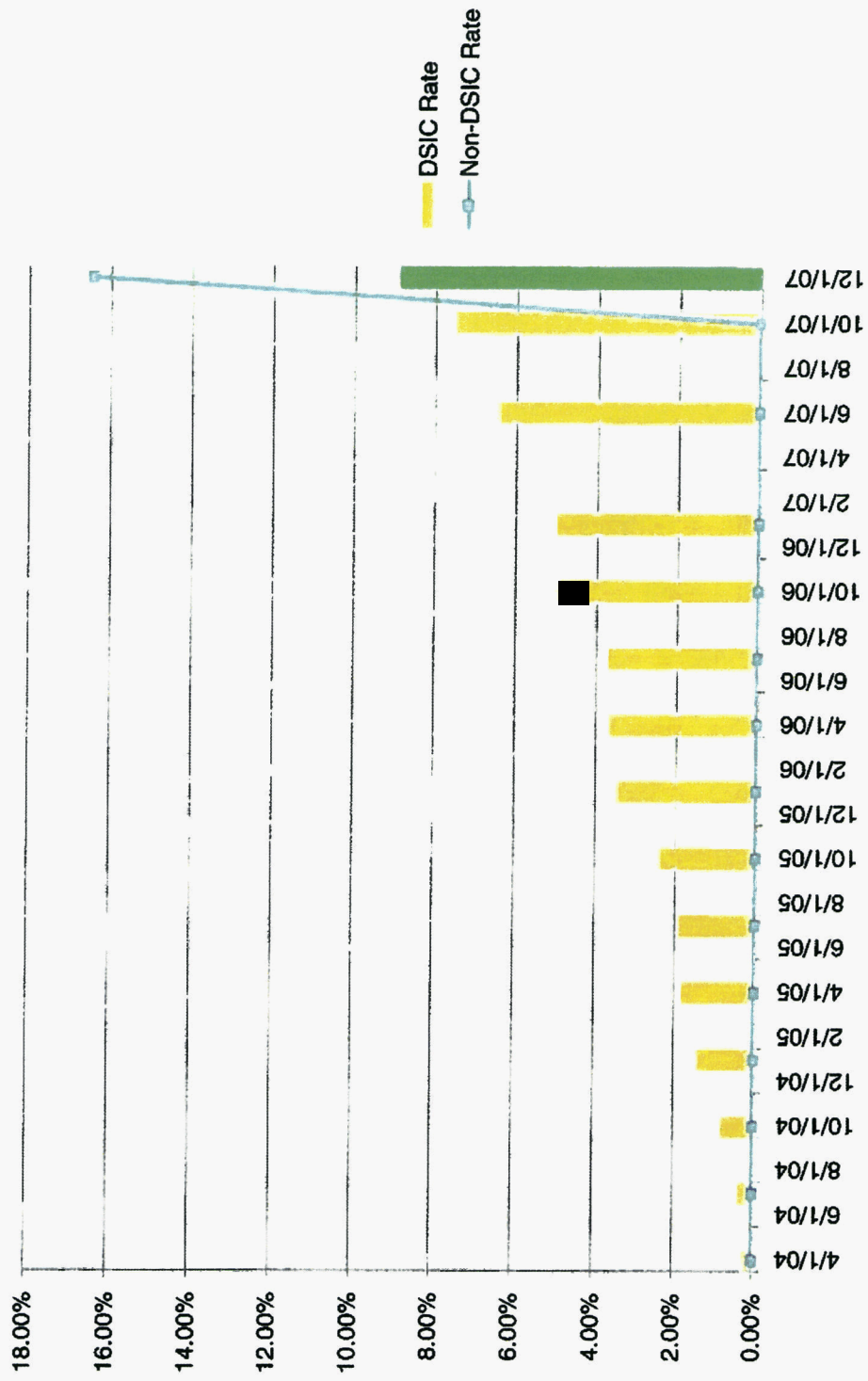
wastewater treatment and collection across a larger group of customers, thereby mitigating the dramatic rate increases for wastewater customers.

This approach makes sense when considering economies of scale. The number of wastewater customers in Pennsylvania is relatively small, which means it is difficult for those customers to absorb large rate increases. In contrast, there are a large number of water customers in Pennsylvania. Thus, if a portion of the wastewater rate increase is spread across the water customers, it will only result in a very small increase in the water customers' bills. This approach also allows wastewater customers to more gradually adjust to their increased rates.

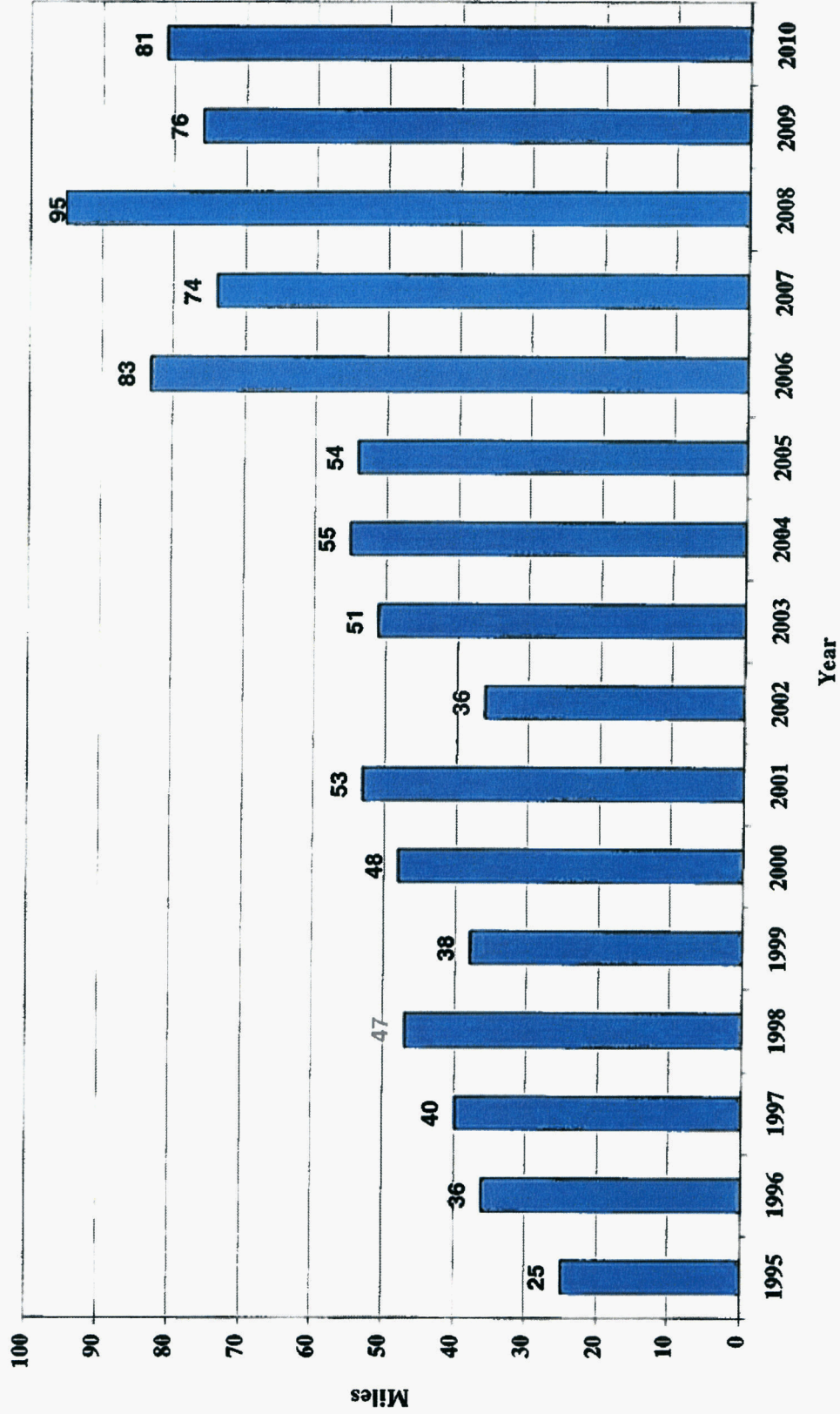
The statutory changes embodied in House Bill 1294 are necessary to enable the PUC to address the regulatory challenges facing us. The alternative ratemaking mechanisms permitted under this legislation will encourage investment in our state, accelerate aging infrastructure replacement, and result in greater rate stability for customers. For these reasons, the PUC encourages the Legislature to pass House Bill 1294.

# DSIC Rate Gradualism

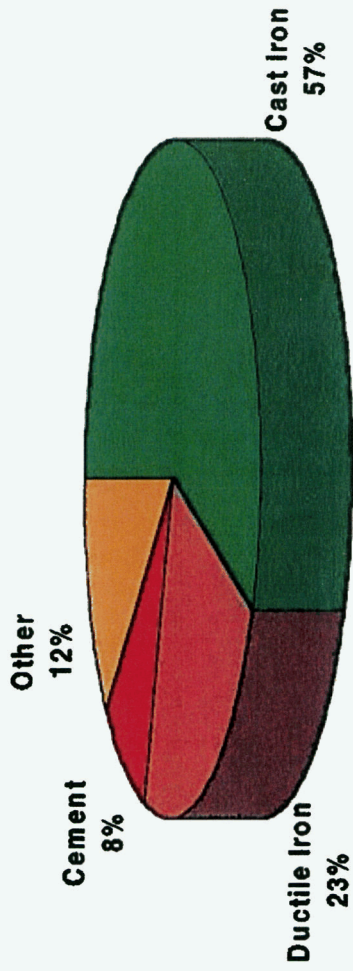
## Smaller rate increases over time



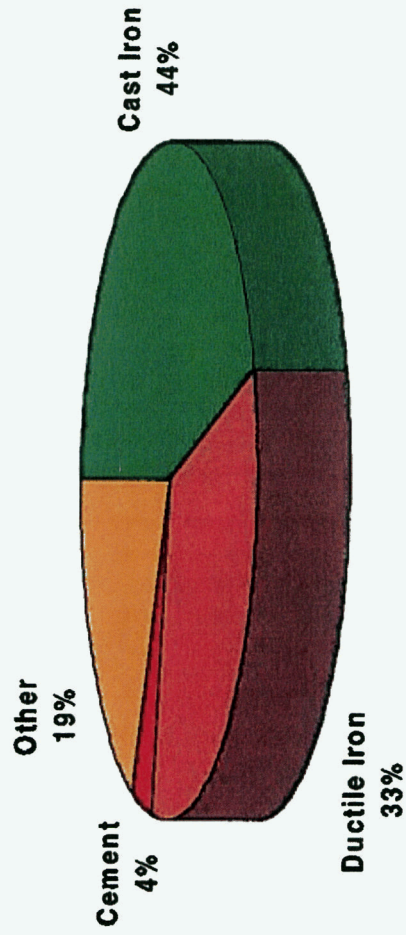
## Pennsylvania American Water: Miles of Pipe Replaced



**1997 (pre-DSIC)**



**2008**



**Projected after Completion of  
Targeted Pool of Pipe**

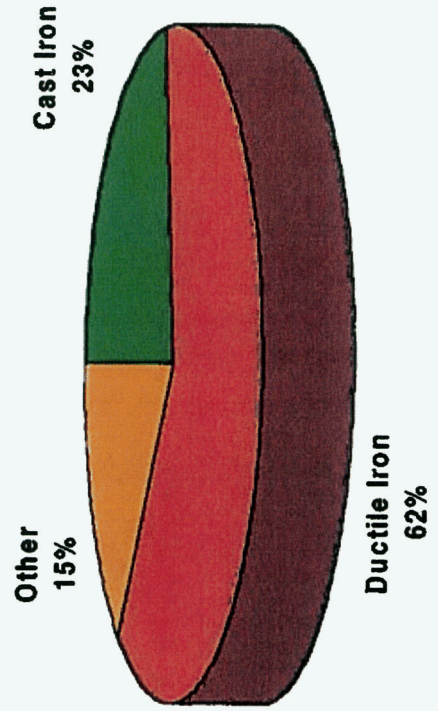
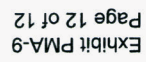




Exhibit PMA-9  
Page 12 of 12

**PMA-10**



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ORIGINAL ARTICLE

## New approach to estimating the cost of common equity capital for public utilities

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**Abstract** The regulatory process for setting public utilities' allowed rate of return on common equity has generally used the Gordon DCF, CAPM and Risk Premium specifications to estimate the cost of common equity. Despite the widely known problems with these models, there has been little movement to adopt more recently developed asset pricing models to provide additional evidence for estimating the cost of capital. This paper presents, validates empirically and applies a general yet simple consumption-based asset pricing specification to model the risk-return relationship for stocks and estimate the cost of common equity for public utilities. The model is not necessarily superior to other models in its practical results, yet these results do indicate that it should be used to provide additional estimates of the cost of common equity. Additionally, the model raises doubts as to whether assets such as utility stocks are a consumption (business cycle) hedge.

**Keywords** Public utilities · Cost of capital · GARCH · Consumption asset pricing model

**JEL Classification** G12 · L94 · L95

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## 1 Introduction

Following electricity deregulation with the National Energy Policy Act of 1992, the estimation of the cost of common equity capital remains a critical component of the utility rate-of-return regulatory process. Since the cost of common equity is not observable in capital markets, it must be inferred from asset pricing models. The models that are commonly applied in regulatory proceedings are the Gordon (1974) Discounted Cash Flow (DCF), the Capital Asset Pricing (CAPM) and Risk Premium Models. There are other tools used to estimate the cost of common equity such as comparable earnings or earnings-to-price ratios, but they are not asset pricing models. The empirical literature on the CAPM is vast {Fama and French (2004)} and the CAPM is used by a number of US regulatory jurisdictions. The DCF model has not been empirically tested to the same extent as the CAPM, yet it is considered by many US regulatory jurisdictions.

The purpose of this paper is to present, test empirically and apply a recently developed general consumption-based asset pricing model that estimates the risk-return relationship directly from asset pricing data and, when estimated with recently developed time series methods, produces a prediction of the equity risk premium that is driven by its predicted volatility. The predicted risk premium is then added to a risk-free rate of return to provide an estimate of the cost of common equity. We predict two forms of the equity risk premium with the model, the risk premium net of the risk-free rate and the equity-to-debt risk premium (equity risk premium net of the relevant bond yield for the company's stock). Either can be applied to predict the common equity cost of capital for a public utility. Although the model is tested and applied to public utilities for rate of return regulation, it can be used to estimate the cost of capital for any stock. Section 2 reviews the asset pricing models typically used in public utility rate cases and the generalized consumption asset pricing model we propose to estimate the cost of common equity. Section 3 discusses the data and the empirical testing of the consumption asset pricing model. Section 4 reviews the application of the model and compares it with the DCF and CAPM results. Section 5 is the conclusion.

## 2 DCF, CAPM and consumption asset pricing model

### 2.1 DCF and CAPM approaches

The standard DCF model frequently used in estimating the cost rate of common equity in regulatory proceedings is defined by the following equation:

$$k = D_0 (1 + g) / P_0 + g,$$

where  $k$  is the expected return on common equity;  $D_0$  is the current dividend per share;  $g$  is the expected dividend per share growth rate; and  $P_0$  is the current market price.

The DCF was developed by Gordon (1974) specifically for regulatory purposes. Underlying the DCF model is the theory that the present value of an expected future stream of net cash flows during the investment holding period can be determined

by discounting those cash flows at the cost of capital, or the investors' capitalization rate. DCF theory indicates that an investor buys a stock for an expected total return rate which is derived from cash flows received in the form of dividends plus appreciation in market price (the expected growth rate) over the investment holding period. Mathematically, the expected dividend yield ( $D_0(1 + g)/P_0$ ) on market price plus an expected growth rate equals the capitalization rate, i.e., the expected return on common equity.

The standard DCF contains several restrictive assumptions, the most contentious of which during utility cost of capital proceedings is typically that dividends per share (DPS), book value per share (BVPS), earnings per share (EPS) as well as market price grow at the same rate in perpetuity. There is also considerable contention over the proper proxy for  $g$ , prospective or historical growth in DPS, BVPS, EPS and market price and over what time period. In addition, although the standard DCF described above is a single stage annual growth model, there is considerable discussion over the use of multiple stage growth models during regulatory proceedings. Some analysts use the discrete version and others use the continuous version of the DCF model. Solving these models for  $k$ , the cost of common equity, results in differing equations to solve for  $k$ . The equation above is from the discrete version. The continuous version uses the current dividend yield and is not adjusted by  $g$ , which results in a lower estimate for  $k$ . Because of these and other restrictive assumptions that require numerous subjective judgments in application, it is often difficult for regulatory commissions to reconcile the frequently large disparities in rates of return on common equity recommended by various parties in a public utility rate case.

The CAPM model is defined by the following equation:

$$k = R_f + \beta (R_m - R_f),$$

where  $k$  is the expected return on common equity;  $R_f$  is the expected risk-free rate of return;  $\beta$  is the expected beta; and  $R_m$  is the expected market return.

CAPM theory defines risk as the co-variability of a security's returns with the market's returns or  $\beta$ , also known as systematic or market risk, with the market beta being defined as 1.0. Because CAPM theory assumes that all investors hold perfectly diversified portfolios, they are presumed to be exposed only to systematic risk and the market (according to the model) will not reward them a risk premium for unsystematic or non-market risk. In other words, the CAPM presumes that investors require compensation only for systematic or market risks which are due to macroeconomic and other events that affect the returns on all assets. Mathematically, the CAPM is applied by adding a forward-looking risk-free rate of return to an expected market equity risk premium adjusted proportionately by the expected beta to reflect the systematic risk.

As with the DCF, there is considerable contention during regulatory cost of capital proceedings as to the proper proxies for all components of the CAPM: the  $R_f$ , the  $R_m$ , as well as  $\beta$ . In addition, the CAPM assumption that the market will only reward investors for systematic or market risk is extremely restrictive when estimating the expected return on common equity for a single asset such as a single jurisdictional regulated operating utility. Additionally, this assumption requires that the investor have a perfectly diversified portfolio, that is, one with no unsystematic risk. Since

this assumption is not applicable, estimating the cost of common equity capital for a single utility's common equity undoubtedly will not reflect the risk actually faced by the imperfectly diversified investor.

As will be discussed in the next section, our application of the risk premium approach, the consumption asset pricing model and GARCH<sup>1</sup> rest on minimal assumptions and restrictions and therefore requires considerably less judgment in its application.

## 2.2 Risk premium approach, consumption asset pricing models, and GARCH

A widely used model to estimate the cost of common equity capital for public utilities is the risk premium approach. This approach often estimates the expected rate of return as the long-term historic mean of the realized risk premium above an historic yield plus the current yield of the relevant bond applicable to a specific utility or peer group of utilities. Litigants in public utility rate proceedings debate the choice of inputs to estimate the risk premium as well as how far back to reach into history to collect data for calculating an average that is representative of a forward-looking premium.

It is surprising that, as popular as the risk premium method is in public utility rate cases, the intuitively appealing general consumption-based asset pricing model, with its minimal assumptions and strong theoretical foundation, has not been applied to estimate the cost of common equity capital for public utilities. The model provides projections of the conditional expected risk premium on an asset based on its relation to its predicted conditional volatility. This model generalizes the well known special case asset pricing models such as the Merton (1973) intertemporal capital asset pricing model, Campbell (1993) intertemporal asset pricing model, and the habit-persistence model of Campbell and Cochrane (1999), which are special cases of the general model. The relation of the model to their specialized cases can be found in Cochrane (2006) and Cochrane (2007). The approach of consumption asset pricing models is to make investment decisions that maximize investors' utility from the consumption that they ultimately desire, not returns.

Even if the model is not used to project directly the expected risk premium, it can, at a minimum, be used to verify that the risk premia data chosen for estimating the cost of capital is empirically validated by fitting the model well. The model can be used to predict the equity risk premia net of the risk-free rate (equity risk premium) or to predict the equity-to-debt risk premium for a firm. We perform both of these empirical tests in this paper. The general consumption-based asset pricing model developed in Michelfelder and Pilotte (2011) and based on Cochrane (2004) provides the relationship of the ex ante risk premium to an asset's own volatility in return:

$$E_t[R_{i,t+1}] - R_{f,t} = -\frac{vol_t[M_{t+1}]}{E_t[M_{t+1}]} vol_t[R_{i,t+1}] corr_t[M_{t+1}, R_{i,t+1}]. \quad (1)$$

<sup>1</sup> GARCH refers to the generalized autoregressive conditional heteroskedasticity regression model which is discussed below.

where  $vol_t$  is the conditional volatility,  $corr_t$  is the conditional correlation, and  $M_{t+1}$  is the stochastic discount factor (SDF).

The SDF is the intertemporal marginal rate of substitution in consumption, or,  $M_{t+1} = \beta \frac{U_{c,t+1}}{U_{c,t}}$ , where the  $U_c$ 's are the marginal utilities of consumption in the next period,  $t+1$ , and the current period,  $t$ , and  $\beta$  is the discount factor for period  $t$  to  $t+1$ . Equation 1 shows that the algebraic sign of the relation between the expected risk premium and the conditional volatility of an asset's risk premium is determined by the correlation between the asset's return and the SDF. That is, the direction of the relation between the asset return and the ratio of intertemporal marginal utilities in consumption inversely determines the relation between the expected risk premium and conditional volatility. When the correlation is equal to negative one, the asset's conditional expected risk premium is perfectly positively correlated with its conditional volatility. A positive relation between the conditionally expected risk premium and volatility obtains when  $-1 < corr_t < 0$ . A negative relation obtains when  $0 < corr_t < 1$ . For an asset that represents a perfect hedge against shocks to the marginal utility of consumption, with  $corr_t = 1$ , there will be a perfect negative correlation between the conditionally expected risk premium and its volatility.<sup>2</sup> Therefore, estimates of the relation between the first two conditional moments of a public utility stock's returns provide a direct test of the effectiveness of a public utility stock, or any asset, as a consumption hedging asset. In Eq. 1,  $vol_t[M_{t+1}]/E_t[M_{t+1}]$  is the slope of the mean-variance frontier. If this slope changes over time, the estimated relation between the stock's risk and return will vary over time. This model can also be viewed simplistically as the projected expected risk premium as a function of its own projected risk, given information available at time  $t$ .

Note that the model allows for the expected risk premium to be negative if the asset hedges shocks to the marginal utility of consumption. Investors are willing to accept an expected rate of return lower than the risk-free rate of return if the pattern of volatility is such that returns are expected to rise with expected reductions in consumption. Simply, investors are willing to *pay* a premium for a higher level of returns volatility that has the desired pattern of returns. These desired returns patterns have a tendency to offset drops in consumption. Therefore, this model shows that investors may not be averse to volatility, but rather to the timing of expected changes in returns.

Summarizing, several conclusions can be drawn from the general model of asset pricing. First, the sign of the relation between a stock's risk premium and conditional volatility depends on the extent to which the stock serves as an intertemporal hedge against shocks to the marginal utility of consumption. Second, the relation between stock risk and return may be time-varying depending on changes in the slope of the mean-variance frontier. Third, hedging assets have desired patterns of volatility that result in expected rates of return that are less than the risk-free rate. We do not expect

<sup>2</sup> A hedging asset is one that has a positive increase in returns that is coincident with a positive shock in the ratio of intertemporal marginal utilities of consumption. Note that if we assume a concave utility function in consumption, as consumption declines, the marginal utility of consumption rises relative to last period marginal utility. If we think of a decline in consumption as a contraction in the business cycle, the hedging asset delivers positive changes in returns when the business cycle is moving into a contraction, and therefore the asset is a business cycle hedge.

that public utility stocks serve as a hedging asset as they are not viewed as defensive stocks (they do not rise in value during downturns in the stock market) due to asymmetric regulation and returns as discussed in detail in Kolbe and Tye (1990). Under asymmetric regulation, utility regulators have a tendency to allow the return on equity to fall below the allowed return during downturns in the business cycle and to reduce the return should it rise above the allowed return during expansions. Therefore we expect that the parameter estimates of the return-risk relationship to be positive as utility stocks are hypothesized to not be hedges.

We use the GARCH model to estimate the general asset pricing model since the GARCH model accommodates ARCH effects that improve the efficiency of the parameter estimates. It also provides a volatility forecasting model for the conditional volatility of the asset's risk premium. The conditional volatility projection is used, in turn to predict the expected risk premium. We also use the GARCH-in-Mean model (GARCH-M) since it specifies that the conditional expected risk premium is a linear function of its conditional volatility. There is a vast body of literature that estimates asset pricing models with the GARCH and GARCH-M methods and therefore we will not attempt to summarize them here.

The GARCH-M model was initially developed and tested by Engle et al. (1987) to estimate the relationship between US Treasury and corporate bond risk premia and their expected volatilities. The GARCH-M model is specified as:

$$R_{t+1} - R_{f,t+1} = \alpha \sigma_{t+1}^2 + \varepsilon_{t+1} \quad (2)$$

$$\sigma_{t+1}^2 = \beta_0 + \beta_1 \sigma_t^2 + \beta_2 \varepsilon_t^2 + \eta_{t+1} \quad (3)$$

$$\varepsilon_t | \psi_{t-1} \sim T(0, \sigma_t^2) \quad (4)$$

where  $R_{t+1}$  is the expected total return on the public utility stock index or individual utility stock;  $R_{f,t+1}$  is the risk-free rate of return or the yield on an index of public utility bonds of a specified bond rating for the equity-to-debt premium;  $\sigma_{t+1}^2$  is the conditional or predicted variance of the risk premium that is conditioned on past information ( $\psi_{t-1}$ ); and  $\varepsilon_t$  is the error term that is conditional on  $\psi_{t-1}$ .

The conditional distribution of the error term is specified as the non-unitary variance T-distribution due to the thick-tailed distribution of the risk premia data. If the error distribution is thick-tailed, using an approximating distribution that accommodates thick tails improves the efficiency of the estimates. The parameter,  $\alpha$ , is the return-to-risk coefficient as specified in Eq. 1 as:

$$\alpha = -\frac{vol_t[M_{t+1}]}{E_t[M_{t+1}]} corr_t[M_{t+1}, R_{i,t+1}] \quad (5)$$

Note that the coefficient will be positive if the conditional correlation between the SDF and the asset return is negative, indicating that the stock is not a hedging asset. Recall that the SDF is the ratio of intertemporal marginal utilities. Assuming a concave utility function, an upward shock in the ratio implies falling consumption, therefore an associated rise (positive correlation) in the return ( $R_i$ ) would offset the reduction

in consumption, thereby causing the sign of  $\alpha$  to be negative. The parameter,  $\alpha$ , is also the ratio of risk premium to variance, or, the Sharpe ratio.

The intercept in Eq. 2 is restricted to zero as specified by the general asset pricing model specification. The restriction on the intercept equal to zero has been found to be robust in producing consistently positive and significant relationships between equity risk premia and risk in GARCH-M models. This is discussed in Lanne and Saikkonen (2006) and Lanne and Luoto (2007). We have found the same results in our modeling in this paper, although we have excluded these results for brevity (available upon request). Therefore we specify the prior assumption that the intercept or the “excess” return, i.e., the return not associated with risk to be equal to zero and drop the intercept from the model.

The consumption asset pricing model is estimated in the empirical section of the paper and applied in the applications section of the paper. The model is tested to (1) determine if equity-to-debt risk premium indices for utilities of differing risk specified by differing bond ratings are validated by the asset pricing model and therefore have some empirical support for risk premium prediction and application to utility cost of capital estimation, (2) determine whether equity risk premia can be predicted and fit the model and therefore be used to estimate the cost of common equity, (3) empirically test the consumption asset pricing model, and (4) ascertain whether utility stocks are assets that hedge shocks to the marginal utility of consumption.

If utility stocks are hedging assets then the cost of common equity should reflect a downward adjustment to a specified risk-free rate to reflect investors’ preferences for a hedge and the compensation that they are willing to pay for it.

### 3 Data and empirical results

We use portfolios as represented by public utility stock and bond indices to estimate the conditional return-risk relationship for the equity-to-debt premium. The equity-to-debt risk premium data employed for estimating Eq. 1 with the GARCH-M conditional return-risk regressions are monthly total returns on the Standard and Poor’s Public Utilities Stock Index (utility portfolio), and the monthly Moody’s Public Utility Aa, A, and Baa yields for the debt cost. We also obtained equity risk premia for the utility portfolio using the Fama-French specified risk-free rate of return, which is the holding period return on a 1-month US Treasury Bill. The data range from January 1928 to December 2007 with 960 observations. The return-risk relationships for the equity-to-debt premia are risk-differentiated by their own bond rating.

As a check, we also estimate Eq. 1 with the GARCH-M for large common stock returns using the monthly Ibbotson Large Company Common Stocks Portfolio total returns and the Ibbotson US Long-Term Government income returns as the risk-free rate. Additionally, as another check, we do the same for the University of Chicago’s Center for Research in Security Prices value-weighted stock index (CRSP) using the Fama-French risk-free rate. This is the Fama-French specification of the market equity risk premium. The data range from January 1926 to December 2007 with 984 observations for the Large Company Common Stock estimation and the data ranges

**Table 1** Descriptive statistics: public utility and large company common stocks equity-to-debt and equity risk premia

Utility bond rating	Mean	Std. Dev.	Skewness	Kurtosis	JB
Aa	0.0037	0.0568	0.0744	10.07	2,001.2***
A	0.0035	0.0568	0.0632	10.06	1,991.8***
Baa	0.0031	0.0568	0.0375	10.02	1,973.6***
Ibbotson					
Large common stocks	0.0054	0.0554	0.4300	12.84	3,954.7***
CRSP value-weighted stock index	0.0062	0.0544	0.2309	10.92	2,519.1***

The public utility equity-to-debt risk premia monthly time series is from January 1928 to December 2007 with 960 observations. The equity risk premium monthly time series for the Large Common Stocks and the CRSP index are January 1926 to December 2007 with 984 observations, and January 1926 to December 2007 with 984 observations, respectively. The public utility stocks equity-to-debt risk premia are calculated as the total return on the S&P Public Utilities Index of stocks minus the Moody's Public Utility Aa, A, and Baa Indices yields to maturity. The Large Company Common Stock equity risk premia are the monthly total returns on the Ibbotson Large Company Common Stocks Portfolio minus the Ibbotson Long-Term US Government Bonds Portfolio income yield. The CRSP equity risk premia, or the Fama-French market risk premia are the CRSP total returns on the value-weighted equity index minus the 1-month holding period return on a 1 month Treasury Bill. The Jarque-Bera (JB) statistic is a goodness-of-fit measure of the departure of the distribution of a data series from normality, based on the levels of skewness and excess kurtosis. The JB statistic is  $\chi^2$  distributed with 2° of freedom. \*\*\* Significant at 0.01 level, one-tailed test

from January 1928 to January 2007 with 960 observations (same as the utilities) for the CRSP estimation.

Table 1 displays the descriptive statistics for these data. We have estimated the mean, standard deviation, skewness and kurtosis parameters, as well as the Jarque-Bera (JB) statistic to test the distribution of the data. The means of the utility equity-to-debt risk premia fall as the risk (bond rating) declines. This is consistent with the notion that larger yields are subtracted from stock returns the lower the bond rating. Intertemporally, there is an inverse relationship between risk premia and interest rates (See Brigham et al. (1985) and Harris et al. (2003)). The mean for risk premia will have a tendency to be larger during low interest rate periods.

Not surprisingly, large company common stocks have the highest mean risk premia as the majority of these firms are not rate-of-return regulated firms with a ceiling on their ROE's close to their cost of capital. Interestingly, the standard deviations of the utility stock returns are similar and slightly higher than large company common stocks. Skewness coefficients are small and positive except for Ibbotson large company common stock returns and CRSP returns that have large positive skewness. This suggests that large unregulated stocks have a tendency to have more and larger positive shocks in returns than do utilities that are rate of return regulated. The kurtosis values show that all of the risk premia are thick-tail distributed. This is also found in the significant JB statistics that test the null hypothesis that the data are normally distributed. The null hypothesis is rejected for all assets. The high kurtosis, low skewness, and significant JB statistics show that the risk premia data are substantially thick-tailed, except for non-utility stocks that are both skewed and thick-tailed. Therefore, robust estimation methods are required to produce efficient regression estimates with non-normal data. Additionally, although not shown but available upon request, the serial correlation and



ARCH Lagrange Multiplier tests show that residuals from OLS regressions of risk premia on volatilities follow an ARCH process. Therefore, the GARCH-M method will improve the efficiency of the estimates. We specify the regression error distribution as a non-unitary variance T-distribution so that thick-tails could be accommodated in the estimation and therefore produce increasingly efficient parameter estimates.

We used maximum likelihood estimation with the likelihood function specified with the non-unitary-variance T-distribution as the approximating distribution of the residuals to accommodate the thick-tailed nature of the error distribution. The equations are estimated as a system using the Marquardt iterative optimization algorithm. The chosen software for estimating the model was EViews<sup>®</sup> version 6.0 (2007).

Table 2 shows the GARCH-M estimations for the consumption asset pricing Eq. 1. We have estimated Eq. 1 for the utility equity risk premia using the Fama-French risk-free rate in addition to the equity-to-debt risk premia risk-differentiated by bond ratings and the two measures of the market equity risk premium. The chosen measure of volatility is the variance of risk premium (in contrast to other such measures such as the standard deviation or the log of variance. Although these results are not shown for brevity, they are robust to these other measures of volatility). The slope, which is the predicted return-to-predicted risk coefficient and Sharpe ratio, is positive and significant at the 99% level for all assets except the utility stock returns with Baa bonds, which is significant at the 95% level. Given that all slopes are positive, public utility stocks are not found to hedge shocks to the marginal utility of consumption. Note that the reward-to-risk slope rises as bond rating rises. This suggests that lower risk utility stocks provide a higher incremental risk-premium for an increase in conditional volatility. This is consistent with other studies that find that lower risk assets, such as shorter maturity bonds, have higher Sharpe Ratios than long-term bonds and stocks. See Pilotte and Sterbenz (2006) and Michelfelder and Pilotte (2011).

The variance equation shows that all GARCH coefficients ( $\beta$ 's) are significant at the 1% level and the sums of  $\beta_1$  and  $\beta_2$  are close to, but less than 1.0, indicating that the residuals of the risk premium equation follow a GARCH process and that the persistence of a volatility shock on returns and stock prices for utility stocks is temporary. The estimates of the non-unitary variance T-distribution degrees of freedom parameter are low and statistically significant, indicating that the residuals are well approximated by the T. Similar values for the log-likelihood functions (Log-L) show that each of the regressions has a similar goodness-of-fit. Chi-squared distributed likelihood ratio tests (not shown but available upon request) that compare the goodness of fit among the T and normal specifications of the likelihood function of the GARCH-M regressions show that the T has a significantly better fit than the normal distribution.

The GARCH-M results for the large company common stocks portfolio are similar to those of the utility stocks. Not surprisingly, large company common stocks do not hedge shocks to the marginal utility of consumption and volatility shocks temporarily affect their valuations. The exception is that the return-risk slope is substantially higher than utility stock slopes. This is partially due to the risk-free nature of the risk-free rates used with the non-utility equity risk premia compared to the

**Table 2** Estimation of return-risk relation: public utility and large company common stocks

Utility bond rating	$\alpha$	$\beta_0$	$\beta_1$	$\beta_2$	Log-L	T dist. D.F.
Aa	1.5183*** (0.5308)	0.0000** (0.0000)	0.8791*** (0.0230)	0.1031*** (0.0219)	1,604.4	9.9254*** (3.0272)
A	1.4536*** (0.5308)	0.0000** (0.0000)	0.8790*** (0.0230)	0.1033*** (0.0220)	1,605.0	9.9381*** (3.0408)
Baa	1.3318** (0.5303)	0.0000** (0.0000)	0.8789*** (0.0229)	0.1040*** (0.0220)	1,605.2	10.0*** (3.0540)
Fama-French $R_f$	2.1428*** (0.5318)	0.0000** (0.0000)	0.8811*** (0.0232)	0.0979*** (0.0212)	1,601.0	9.8773*** (2.9700)
Ibbotson						
Large company common stocks	2.7753*** (0.5513)	0.0001*** (0.0000)	0.8381*** (0.0269)	0.1186*** (0.0332)	1,620.8	8.8457*** (2.1613)
CRSP value-weighted stock index	3.3873*** (0.5673)	0.0001*** (0.0000)	0.8330*** (0.0270)	0.1149*** (0.0358)	1,598.9	8.8571*** (1.9505)

The results below are the GARCH-in-Mean regressions for the risk premium ( $R_{t+1} - R_{f,t+1}$ ) on the conditional variance of the risk premium ( $\sigma_{t+1}^2$ ) in the mean equation. The intercept in the mean equation is restricted to be equal to zero. The public utility equity-to-debt risk premia monthly time series is from January 1928 to December 2007 with 960 observations. The equity risk premium monthly time series for the Large Company Common Stocks and the CRSP index are January 1926 to December 2007 with 984 observations, and January 1926 to December 2007 with 984 observations, respectively. The public utility stocks equity-to-debt risk premia are calculated as the total return on the S&P Public Utilities Index of stocks minus the Moody's Public Utility Aa, A, and Baa Indices yields to maturity. The Large Company Common Stock equity risk premia are the monthly total returns on the Ibbotson Large Company Common Stocks Portfolio minus the Ibbotson Long-Term US Government Bonds Portfolio income yield. The CRSP equity risk premia, or the Fama-French market risk premia are the CRSP total returns on the value-weighted equity index minus the 1-month holding period return on a 1 month Treasury Bill. The estimated model is:

$$R_{t+1} - R_{f,t+1} = \alpha \sigma_{t+1}^2 + \varepsilon_{t+1} \text{ where } \alpha = -\frac{vol_t[M_{t+1}]}{E_t[M_{t+1}]} corr_t[M_{t+1}, R_{t,t+1}]$$

$$\sigma_{t+1}^2 = \beta_0 + \beta_1 \sigma_t^2 + \beta_2 \varepsilon_t^2 + \eta_{t+1}$$

The conditional distribution of the error term is the non-unitary variance T-distribution to accommodate the kurtosis of the risk premia and error term. Standard errors are in parentheses. \*\*\*, \*\*, \* denote significance at the 0.01, 0.05, and 0.10 levels, respectively for two-tail tests

utility bond yields that reflect risk. The utility stocks slope value of 2.1428 using the Fama-French risk-free rate is closer to the higher CRSP value of 3.3873 that is also based on the Fama-French risk-free rate. This is inconsistent with previous results herein and in other papers that find that Sharpe Ratios are lower for higher risk assets unless this finding can be interpreted as utility stocks having more risk than non-regulated stocks. The standard deviations on Table 1 suggest that utility stock return volatilities are as high as the stock returns of non-regulated firms. However, similar model estimates of portfolios of common stocks yield unstable results, such as negative as well as positive return-risk slopes when the intercept is not restricted to zero. See Campbell (1987), Glosten et al. (1993), Harvey (2001), and Whitelaw (1994).

Stock market results are highly sensitive to empirical model specification. Many studies do not consider the impact of a zero-intercept prior restriction on the stability of their results. This simple innovation has led to more consistent results in modeling stock market risk-return relationships, and therefore we have included it in this paper.

The estimation of the consumption asset pricing model for utility stock equity-debt risk premia shows that the use of bond-rating risk-differentiated risk premia are validated as their risk-return relationships are well-fitted by theoretical and empirical models of risk and return. Therefore, these data impound good representations of the risk and reward relationship.

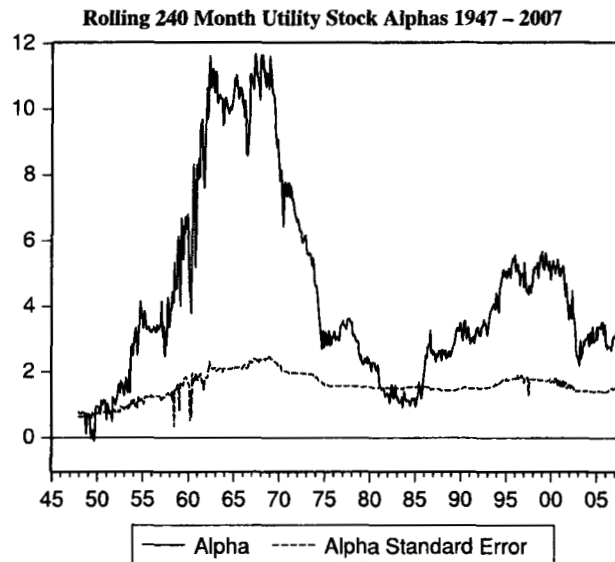
One concern is the intertemporal stability of the alphas. Figure 1 plots the utility stock portfolio alpha (using the Fama-French  $R_f$  to calculate the premium) and its standard error for 240 month rolling regressions of the model estimated with GARCH-M in the same manner as described above to review the intertemporal stability of the alpha. A 20-year period was used for each estimation to trade off timeliness with sufficient observation of up and down stock market regimes and business cycles. This resulted in 720 estimated alphas from 1947 to 2007. The results show that the utility alpha is stable to the extent that the algebraic sign is always positive and generally significant, therefore the nature of utility stocks are assets that are not and have never been hedges during the second half of the twentieth century up to the present. The value of the alpha does change substantially. The mean of the alpha is 4.40 with a range from  $-0.11$  (insignificantly different from 0) to 11.66. As a comparison, the alpha for the CRSP value-weighted stock index was also estimated with rolling regressions in the same manner and for the same time period. Figure 2 is a plot of the CRSP alpha and standard error. Note that the general stock market alpha is similar to that of utility stocks. They are all positive and almost all statistically significant and follow a strikingly similar cycle. Figure 3 plots both the utility and stock market alphas and demonstrates the similarity. The correlation coefficient between the utility and stock market alphas is 0.88. Recalling that the alpha is a Sharpe Ratio, we see that return to risk ratio does change substantially. This is consistent with the results in Pilotte and Sterbenz (2006).

One other interesting observation is that the standard errors of the alphas are highly stable over the study period and are very similar in magnitude regardless of the size of the corresponding alpha. Whereas the alpha follows a cyclical pattern, the volatility in alpha is highly stationary around a constant, long-run mean.

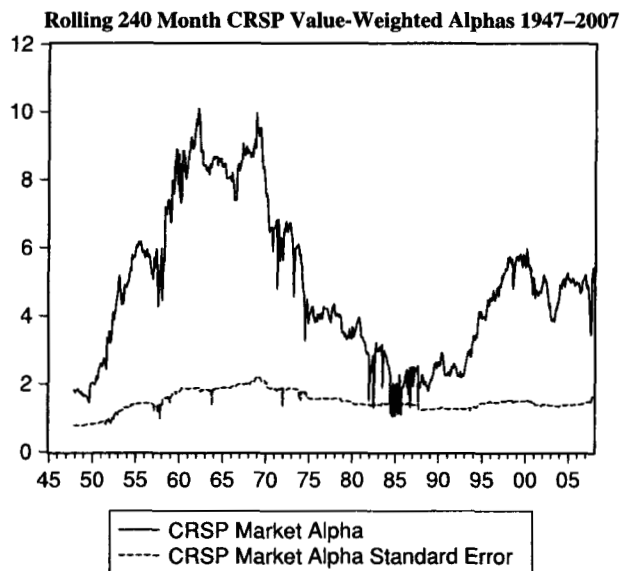
The GARCH-M model estimations of the consumption asset pricing model were specified with variance as the measure of volatility. We also performed the same model estimations with alternative specifications of volatility such as the standard deviation and the log of variance and the results were not sensitive to this specification.

#### 4 Application

We apply the model in this section to compare the cost of common equity capital estimates with the DCF and CAPM models. Using EViews<sup>®</sup> Version 6.0, we estimated the model coefficients ( $\alpha$ ,  $\beta$ 's) over rolling 24 month periods ending December 2008.



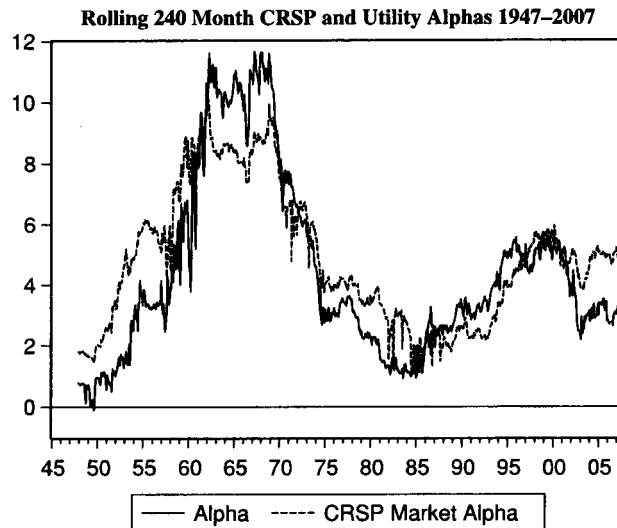
**Fig. 1** Rolling 240 month utility stock alphas 1947–2007



**Fig. 2** Rolling 240 month CRSP value-weighted alphas 1947–2007

We repeated the estimation over 5, 10, 15, 20 and 79 year periods.<sup>3</sup> Predicted monthly variances ( $\sigma_{t+1}^2$ ) were generated from these estimations to produce predicted risk premiums that were calculated by multiplying the predicted variance by the “ $\alpha$ ” slope

<sup>3</sup> We did not include the results of the 10 and 15 year estimations to abbreviate the amount of empirical results presented since they added no material insights beyond those already presented.



**Fig. 3** Rolling 240 month CRSP and utility alphas 1947–2007

**Table 3** Estimates of expected risk premia

	Mean (%)		Range (%)		Standard deviation (%)	
	Average	Spot	Average	Spot	Average	Spot
<b>Ibbotson Associates data</b>						
79-years	9.59	5.76	8.74–9.96	2.62–22.60	0.32	5.24
20-years	6.77	6.94	4.99–8.50	2.24–28.95	0.95	6.88
5-years	4.20	10.25	–98.49–11.62	–100.00–39.65	22.00	26.61
<b>S&amp;P Utility Index</b>						
79-years	5.28	2.90	4.30–5.28	1.65–8.15	0.32	1.60
20-years	3.93	3.51	2.78–5.03	2.18–6.88	0.57	1.11
5-years	31.82	326.63	7.77–156.97	6.12–6465.74	31.47	1283.51

coefficient. To test the stability of the predicted risk premia over time, the predicted risk premia were calculated using either the predicted variance over each entire time period or the last monthly (spot) predicted variance. Table 3 presents the mean predicted risk premia, the range of predicted premia and the standard deviations for each time period. It is clear from the results that the risk premia are more stable over the rolling 24 month period when calculated using the average predicted variance compared with using the spot variance. Secondly, the 20 and 79 year means are substantially more stable and reasonable in magnitude than the 5 year means.

Next, given the lessons from the analyses above, we apply the model to mechanically<sup>4</sup> estimate the cost of common equity for 8 utility companies using the model and

<sup>4</sup> The term “mechanically” in this context means that the resulting values have been developed in a consistent manner with the same inputs across all utility stocks but no subjective judgment was used to develop final values for each specific utility stock application.

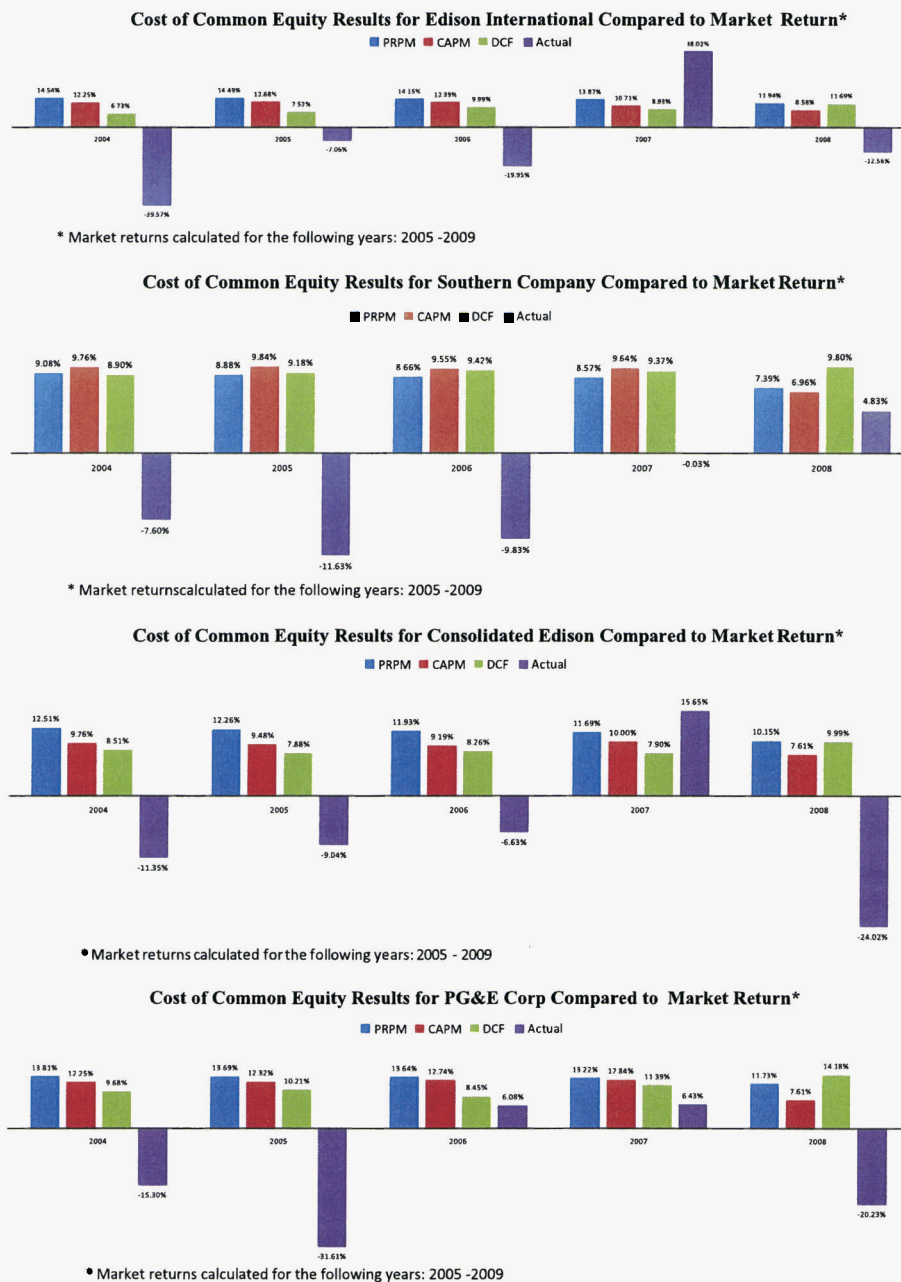
the DCF and CAPM as comparisons. We also calculated the realized market return for comparison. Two publicly-traded electric, electric and gas combination, gas, and water utilities respectively were chosen for the application. The Gordon (1974) DCF and CAPM models are used in many utility regulatory jurisdictions in the US.

The DCF was applied using a dividend yield,  $D_0/P_0$ , derived by dividing the year-end indicated dividend per share ( $D_0$ ) by the year-end spot market price ( $P_0$ ). The dividend yield is grown by the year-end I/B/E/S five year projected earnings per share growth rate ( $g$ ) to derive  $D_0(1+g)/P_0$ . The one-year predicted dividend yield is then added to the I/B/E/S five-year projected EPS growth rate to obtain the DCF estimate of the cost of common equity capital,  $k$ . This study was conducted for the 5 years ending 2008.

The CAPM was applied by multiplying the Value Line beta ( $\beta$ ) available at year-end for each company by the long-term historic arithmetic mean market risk premium ( $R_m - R_f$ ).  $R_m - R_f$  is derived as the spread of the total return of large company common stocks over the income return on long-term government bonds from the Ibbotson SBBi 2009 Valuation Yearbook. The resulting company-specific market equity risk premium is then added to a projected consensus estimate of the yield on 30-year U.S. Treasury rate provided by Blue Chip Financial Forecasts as the risk-free rate ( $R_f$ ) to obtain the CAPM result. This study was also conducted over the 5 years ending 2008.

Figures 4–11 show the histograms of the cost of common equity capital estimations for each of the eight public utility stocks and the realized market returns in the forthcoming year. The consumption asset pricing model appears to track more consistently with the CAPM than with the DCF which seems to produce generally lower values than the other methods. The consumption asset pricing model results are similar to the CAPM. The model and the CAPM compete as the best predictor of the rate of return on the book value of common equity (not shown but available upon request), but none of the expected returns were good predictors of market returns. That does not infer that they were not good predictors of *expected* market returns. These results are an initial indicator that the consumption asset pricing model provides reasonable and stable results. This paper does not suggest at this early juncture that the consumption asset pricing model is superior to the CAPM or DCF, although it is based on far less restrictive assumptions than these other models. For example, both the DCF and CAPM assume that markets are efficient. Many assume that the DCF requires that the market-to-book ratio to always equal one, whereas the long-term value for the Standard and Poor's 500 is equal to 2.34. The CAPM assumes that investors demand higher returns for higher volatility and that the minimum required return is the risk-free rate, whereas the consumption asset pricing model allows for investors to require returns less than the risk-free rate for stocks that may have relatively higher volatility but are hedging assets that have desirable return fluctuation patterns that offset downturns in the business cycle. Unlike the CAPM, the model prices the risk to which investors are actually exposed, whether it's systematic risk or not. Some investors are diversified and some are not; the model prices whatever risk to which the aggregate of investors of the specific stock is exposed.

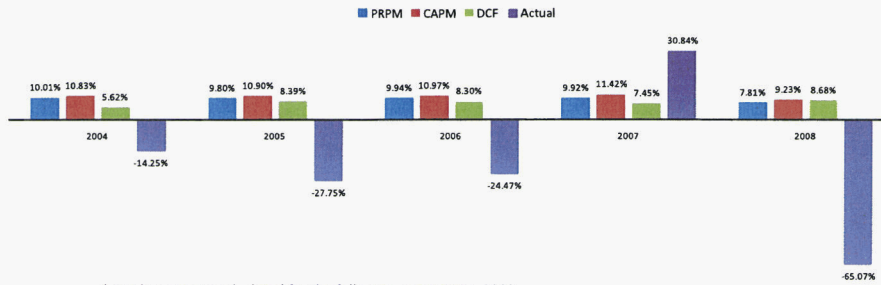
We find that the consumption asset pricing model should be used in combination with other cost of common equity pricing models as additional information in the devel-



**Figs. 4-11** Comparison of the cost of common equity estimates and market

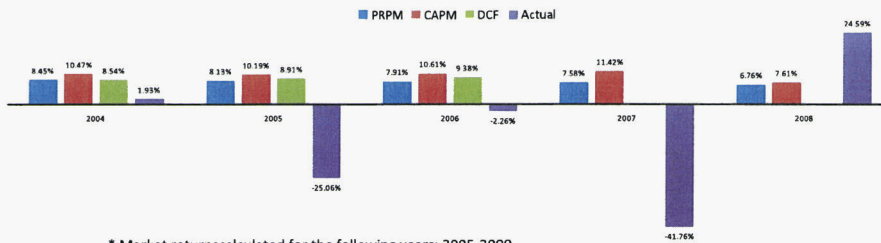
opment of a cost of common equity capital recommendation. Practitioners may find the modeling methods and the use of relatively advanced econometric methods rather cumbersome. The software for performing these estimations is readily available from EViews<sup>®</sup> and SAS<sup>®</sup>; two commonly available software packages at utilities, consult-

**Cost of Common Equity Results for National Fuel Gas Co. Compared to Market Return\***



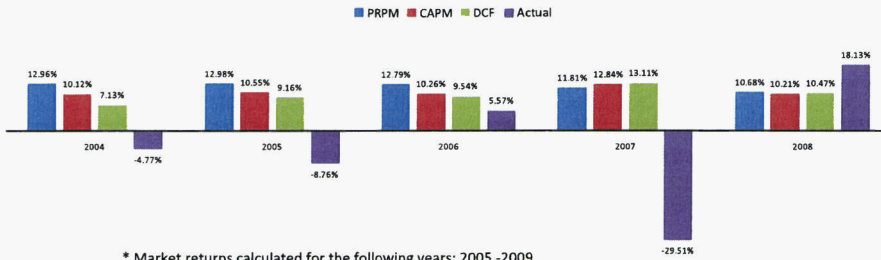
\* Market returnscalculated for the following years: 2005 -2009

**Cost of Common Equity Results for Laclede Group Compared to Market Return\***



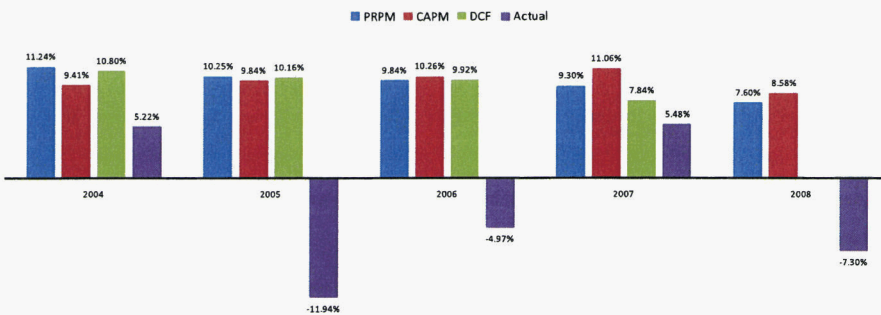
\* Market returnscalculated for the following years: 2005-2009  
Missing DCF Cost of Capital Estimates Due to Unavailable Growth Rate

**Cost of Common Equity Results for California Water Service Group Compared to Market Return \***



\* Market returns calculated for the following years: 2005 -2009

**Cost of Common Equity Results for Middlesex Water Company Compared to Market Return \***



\* Market returnscalculated for following years: 2005 -2009  
Missing DCF Cost of Capital Estimate Due to Unavailable Growth Rate

**Figs. 4-11 continued**



ing firms and financial firms. Recent Ph.D. and M.S. holding members of research departments of investment and consulting firms have ready access to the model and methods discussed in this paper, although it will require years for these tools, like any “new” technology, to diffuse into standard use. Another problem is that the model requires a substantial time series history on stock returns data to develop stable estimates of risk premia. This is problematic especially for the electric and gas utility industries that have consolidated with many mergers in the recent past. This problem can be addressed by developing and predicting the value-weighted risk premium of a portfolio of similar stocks such as electric utilities that have nuclear generating assets. The specific stock in question would be included in the returns index with a weight based on market capitalization that would go to 0 when the stock price history is no longer existent reaching back into the past.

## 5 Conclusion

The purpose of this paper is to introduce, test empirically and apply a general consumption based asset pricing model that is based on a minimum of assumptions and restrictions that can be used to predict the risk premium to be applied in estimating the cost of common equity for public utilities in regulatory proceedings. The results support the simple consumption-based asset pricing model that predicts the ex ante risk premium with a conditionally predicted volatility in risk premium. The estimates of the cost of common equity from the consumption asset pricing model compare well with rates of return on the book value of common equity and with the CAPM, although both the model and the CAPM results are substantially higher than the DCF. This is quite common in the practice of the cost of common equity in the utility industry. The results of the model are stable and consistent over time. Therefore the model should be considered as it provides additional evidence on the cost of common equity in general and specifically in public utility regulatory proceedings. Secondly, the use of bond-rated yields to predict risk differentiated equity-to-debt risk premia is supported by the empirical evidence and therefore should be applied in estimating the cost of common equity. Finally, the robust empirical evidence on the positive risk-return relationship also shows that utility stocks are not a consumption hedge and are not good hedging securities against contractions in the economy. The model and estimation methodology presented in this paper provide a relatively simple tool to determine whether any asset is a hedge to adverse changes in the business cycle through the level of consumption in the economy.

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**PMA-11**

Arizona Water Company  
Calculation of the Predictive Rick Premium Model (PRPM™)  
For ACC Staff Witness Cassidy's and RUCO Witness Rigsby's Water Sample Groups

	<u>American States Water Co.</u>	<u>Aqua America, Inc.</u>	<u>California Water Group</u>	<u>Connecticut Water Service, Inc.</u>	<u>Middlesex Water Co.</u>	<u>SJW Corp.</u>
Average	0.38%	0.49%	0.17%	0.29%	0.27%	0.43%
GARCH Coefficient	1.41953	2.111401	2.845282	1.67851	1.870333	1.275542
Projected Co. RP	6.62%	13.11%	5.84%	6.09%	6.35%	6.77%
Risk-Free Rate (1)	<u>3.58%</u>	<u>3.58%</u>	<u>3.58%</u>	<u>3.58%</u>	<u>3.58%</u>	<u>3.58%</u>
PRPM Result	<u>10.21%</u>	<u>16.69%</u>	<u>9.43%</u>	<u>9.67%</u>	<u>9.93%</u>	<u>10.36%</u>
Average for ACC Staff Witness Cassidy's Water Sample Group						<u>11.05%</u>
Average for RUCO Witness Rigsby's Water Sample Group						<u>11.32%</u>

Notes:

- (1) Average forecast based upon six quarterly estimates of 30-year Treasury bonds per the consensus of nearly 50 economists reported in Blue Chip Financial Forecasts dated April 1, 2012 (page 2 of this Exhibit). The estimates are detailed below.

Q2 2012	3.30 %
Q3 2012	3.40
Q4 2012	3.50
Q1 2013	3.60
Q2 2013	3.80
Q3 2013	<u>3.90</u>
Average	<u>3.58 %</u>

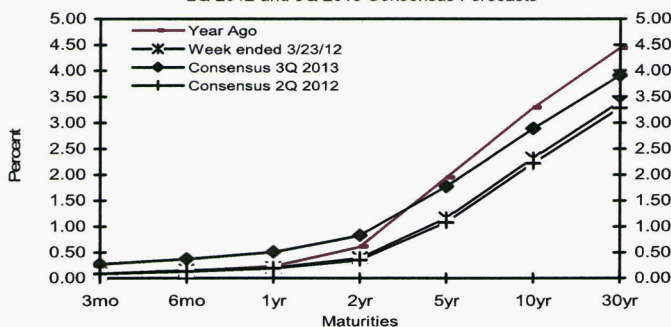
## Consensus Forecasts Of U.S. Interest Rates And Key Assumptions<sup>1</sup>

Interest Rates	-----History-----								Consensus Forecasts-Quarterly Avg.					
	-----Average For Week Ending-----				----Average For Month----			Latest Q*	2Q	3Q	4Q	1Q	2Q	3Q
	Mar. 23	Mar. 16	Mar. 9	Mar. 2	Feb.	Jan.	Dec.	1Q 2012	2012	2012	2012	2013	2013	2013
Federal Funds Rate	0.15	0.12	0.11	0.09	0.10	0.08	0.07	0.10	0.1	0.1	0.1	0.1	0.2	0.3
Prime Rate	3.25	3.25	3.25	3.25	3.25	3.25	3.25	3.25	3.3	3.3	3.3	3.3	3.3	3.3
LIBOR, 3-mo.	0.47	0.47	0.47	0.48	0.50	0.57	0.56	0.51	0.5	0.4	0.4	0.5	0.5	0.6
Commercial Paper, 1-mo.	0.15	0.13	0.12	0.13	0.12	0.09	0.10	0.11	0.1	0.2	0.2	0.2	0.3	0.4
Treasury bill, 3-mo.	0.09	0.09	0.08	0.09	0.09	0.03	0.01	0.07	0.1	0.1	0.1	0.1	0.2	0.3
Treasury bill, 6-mo.	0.15	0.15	0.14	0.13	0.12	0.07	0.05	0.11	0.1	0.2	0.2	0.2	0.3	0.4
Treasury bill, 1 yr.	0.20	0.20	0.18	0.18	0.16	0.12	0.12	0.16	0.2	0.2	0.2	0.3	0.4	0.5
Treasury note, 2 yr.	0.39	0.36	0.31	0.30	0.28	0.24	0.26	0.29	0.4	0.4	0.5	0.6	0.7	0.8
Treasury note, 5 yr.	1.16	1.06	0.87	0.86	0.83	0.84	0.89	0.90	1.1	1.2	1.3	1.4	1.6	1.8
Treasury note, 10 yr.	2.32	2.21	2.00	1.97	1.97	1.97	1.98	2.04	2.2	2.3	2.5	2.6	2.7	2.9
Treasury note, 30 yr.	3.40	3.34	3.14	3.09	3.11	3.03	2.98	3.14	3.3	3.4	3.5	3.6	3.8	3.9
Corporate Aaa bond	4.09	4.05	3.88	3.82	3.85	3.85	3.93	3.90	4.0	4.1	4.2	4.3	4.4	4.5
Corporate Baa bond	5.34	5.28	5.11	5.08	5.14	5.23	5.25	5.20	5.3	5.3	5.4	5.5	5.5	5.6
State & Local bonds	4.01	3.95	3.84	4.72	3.66	3.68	3.95	3.76	3.9	4.0	4.2	4.2	4.3	4.4
Home mortgage rate	4.08	3.92	3.88	3.90	3.89	3.92	3.96	3.92	4.0	4.1	4.2	4.3	4.5	4.6
Key Assumptions	-----History-----								Consensus Forecasts-Quarterly					
	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q*	2Q	3Q	4Q	1Q	2Q	3Q
	2010	2010	2010	2011	2011	2011	2011	2012	2012	2012	2012	2013	2013	2013
Major Currency Index	77.6	75.9	73.0	71.9	69.6	69.9	72.4	73.0	73.3	73.4	73.4	73.3	73.3	73.4
Real GDP	3.8	2.5	2.3	0.4	1.3	1.8	3.0	2.1	2.3	2.5	2.7	2.5	2.7	2.9
GDP Price Index	1.5	1.4	1.9	2.5	2.5	2.6	0.9	1.9	1.8	1.9	1.9	2.0	2.0	2.0
Consumer Price Index	-0.5	1.4	2.6	5.2	4.1	3.1	0.9	2.6	2.4	2.3	2.1	2.2	2.2	2.4

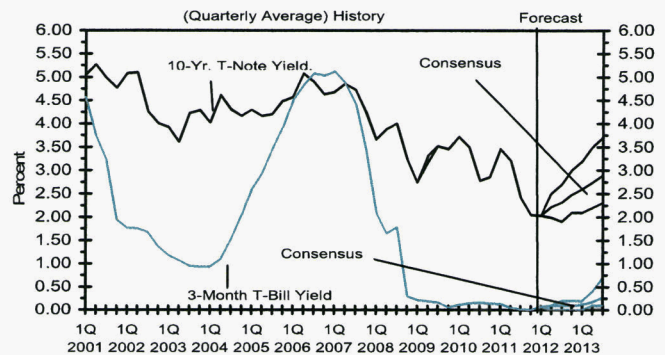
Forecasts for interest rates and the Federal Reserve's Major Currency Index represent averages for the quarter. Forecasts for Real GDP, GDP Price Index and Consumer Price Index are seasonally-adjusted annual rates of change (saar). Individual panel members' forecasts are on pages 4 through 9. Historical data for interest rates except LIBOR is from Federal Reserve Release (FRSR) H.15. LIBOR quotes available from *The Wall Street Journal*. Interest rate definitions are the same as those in FRSR H.15. Treasury yields are reported on a constant maturity basis. Historical data for the Fed's Major Currency Index is from FRSR H.10 and G.5. Historical data for Real GDP and GDP Chained Price Index are from the Bureau of Economic Analysis (BEA). Consumer Price Index (CPI) history is from the Department of Labor's Bureau of Labor Statistics (BLS). <sup>1</sup>Interest rate data for 1Q 2012 based on historical data through the week ended March 23rd. <sup>2</sup>Data for 1Q 2012 Major Currency Index also is based on data through week ended March 23rd. Figures for 1Q 2012 Real GDP, GDP Chained Price Index and Consumer Price Index are consensus forecasts based on a special question asked of the panelists this month (see page 14).

### U.S. Treasury Yield Curve

Week ended March 23, 2012 and Year Ago vs. 2Q 2012 and 3Q 2013 Consensus Forecasts

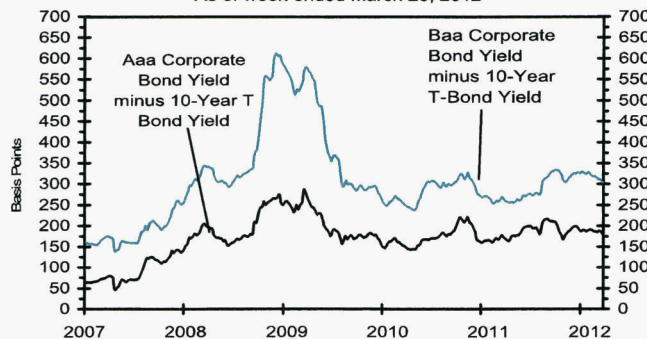


### U.S. 3-Mo. T-Bills & 10-Yr. T-Note Yield



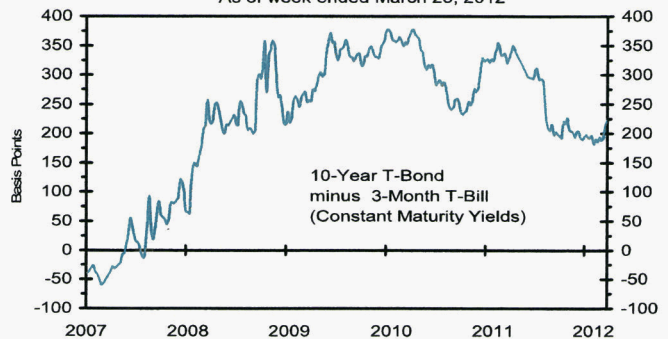
### Corporate Bond Spreads

As of week ended March 23, 2012



### U.S. Treasury Yield Curve

As of week ended March 23, 2012



***ARIZONA WATER COMPANY***



**Docket No. W-01445A-11-0310**

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**2011 RATE HEARING**

**For Test Year Ending 12/31/10**

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**PREPARED  
REBUTTAL TESTIMONY & EXHIBITS  
OF  
JOSEPH D. HARRIS**

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## TABLE OF CONTENTS

	Page
I. INTRODUCTION & PURPOSE OF TESTIMONY.....	3
II. DISTRIBUTION SYSTEM IMPROVEMENT CHARGE .....	4
III. RATE CONSOLIDATION.....	9
IV. OFF-SITE FACILITIES FEE.....	11

1 **ARIZONA WATER COMPANY**

2  
3 **Rebuttal Testimony of**  
4 **Joseph D. Harris**  
5

6 **I. Introduction and Purpose of Testimony**

7 **Q. PLEASE STATE YOUR NAME, EMPLOYER AND OCCUPATION.**

8 A. My name is Joseph D. Harris. I am employed by Arizona Water Company (the  
9 "Company") as Vice President and Treasurer.

10 **Q. ARE YOU THE SAME JOSEPH D. HARRIS THAT PREVIOUSLY PROVIDED**  
11 **DIRECT TESTIMONY IN THIS MATTER?**

12 A. Yes.

13 **Q. HAVE YOU REVIEWED THE DIRECT TESTIMONY FILED BY THE OTHER**  
14 **PARTIES TO THIS PROCEEDING?**

15 A. Yes. I have reviewed the testimony of each of the witnesses of the Arizona  
16 Corporation Commission's ("Commission") Utilities Division Staff ("Staff") and the  
17 Residential Utility Consumer Office ("RUCO").

18 **Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?**

19 A. The purpose of my rebuttal testimony is to respond to the direct testimony of  
20 Staff witnesses Jeffrey M. Michlik and Bentley Erdwurm, and RUCO witness  
21 William A. Rigsby.

22 **Q. HOW IS YOUR TESTIMONY ORGANIZED?**

23 A. My testimony is presented in four sections including this introductory Section I.  
24 In Section II, I present the Company's response to both Staff's and RUCO's  
25 witnesses concerning the implementation of a Distribution System Improvement  
26 Charge ("DSIC"). In Section III, I respond to Staff's testimony concerning the  
27 consolidation of San Manuel, Oracle and SaddleBrooke Ranch into the Falcon  
28



Valley system. Finally, in Section IV I respond to Staff's recommendation to lower the amount of the Company's proposed Off-Site Facilities Fee.

**II. Distribution System Improvement Charge**

**Q. WHAT FACTORS CAUSED THE COMPANY TO PROPOSE A DSIC IN THIS CASE?**

A. In Decision No. 71845, the Commission ordered the Company to prepare a study on distribution system improvement charges and "utilize this information to inform further proposals in its future rate cases."<sup>1</sup>

**Q. WAS A DSIC STUDY PREPARED AND FILED WITH THE COMMISSION?**

A. Yes. A copy of the DSIC study was filed as a compliance item in Docket No. W-01445A-08-0440 and was also included as Exhibit JDH-3 to my direct testimony.

**Q. WERE THERE ANY OTHER REPORTS SUBMITTED WHICH SUPPORTED THE COMPANY'S DSIC PROPOSAL IN THIS CASE?**

A. Yes. The "Water Loss Reduction Program for Water Systems in the Eastern Group" report was filed as Exhibit FKS-10 to Mr. Schneider's direct testimony. That report presented a detailed analysis of the distribution infrastructure in the Superstition, Cochise and Falcon Valley systems and the need for substantial investment to replace aging and failing infrastructure.

**Q. DO YOU AGREE WITH BOTH MR. MICHLIK AND MR. RIGSBY THAT THE COMPANY'S WATER INFRASTRUCTURE REPLACEMENT PLAN, THAT SERVES AS THE BASIS FOR THE DSIC, IS FOR ROUTINE EXPENDITURES?**

A. No. The Company presented a detailed analysis of its Superstition, Cochise and Falcon Valley water distribution systems which showed that the Company needs to replace over 371,000 feet of aging and failing water mains, 3,850 failing plastic

---

<sup>1</sup> Arizona Corporation Commission Decision No. 71845, pg 95, lines 6-7.

1 service lines and 4,915 service lines on failing water mains at a cost of nearly  
2 \$67 million over the first ten-year construction phase. This represents a more  
3 than 500 percent increase over the amount of plant the Company has replaced in  
4 the previous decade and cannot be considered routine or ordinary. Company  
5 witness Pauline M. Ahern provides additional testimony and evidence supporting  
6 the fact that these capital expenditures are anything but ordinary in Sections III  
7 and IV of her rebuttal testimony.

8 **Q. IS \$67 MILLION WORTH OF WATER MAIN AND SERVICE LINE**  
9 **REPLACEMENTS IN THE SUPERSTITION, COCHISE AND FALCON VALLEY**  
10 **SYSTEMS SIGNIFICANT?**

11 A. Yes. To put the \$67 million in perspective, the Company invested approximately  
12 \$35 million designing and constructing arsenic removal facilities in its first phase  
13 of implementation for the entire Company. Staff and RUCO determined that the  
14 magnitude of the arsenic removal facility capital investment was extraordinary,  
15 and without a timely recovery mechanism, would have had a detrimental financial  
16 impact on the Company's viability. As a result, both Staff and RUCO supported  
17 the Company's Arsenic Cost Recovery Mechanism ("ACRM").

18 **Q. DID THE ACRM HELP TO MITIGATE THE DETRIMENTAL FINANCIAL**  
19 **IMPACT OF THE COMPANY'S ARSENIC REMOVAL FACILITY CAPITAL**  
20 **INVESTMENT?**

21 A. Yes. The ACRM helped mitigate the detrimental financial impact of the  
22 Company's extraordinary investment in arsenic removal facilities by partially  
23 addressing regulatory lag. In fact, the magnitude of the Company's investment in  
24 arsenic treatment facilities was such that even with the benefits afforded by the  
25 ACRM, the Company's debt ratio increased sharply during that time period due,  
26 in part, to the Company's inability to earn its authorized rate of return. This is  
27 illustrated graphically in the following chart:  
28

### Arizona Water Company Actual vs. Authorized Rate of Return & Debt Ratio



Assuming the Company had to undertake \$67 million worth of water main and service line replacements in the Eastern Group without a DSIC or similar mechanism designed to address regulatory lag by providing cash flows, the swings in the debt ratio and the disparity between earned and authorized returns depicted in the above graph would be significantly larger. To the extent the Company's ability to earn its authorized return is impaired, its financial integrity and ability to fund infrastructure projects are further compromised.

**Q. DOES THE \$67 MILLION FOR THE SUPERSTITION, COCHISE AND FALCON VALLEY SYSTEMS REPRESENT THE COMPANY'S ENTIRE AGING AND FAILING WATER MAIN AND SERVICE LINE REPLACEMENT NEEDS?**

**A.** No. As part of the Company's pending Western Group rate case application, the Company prepared and submitted a similar detailed report which documents the aging and failing water mains and service lines the Company needs to replace in

1 those water systems. That report concluded that the investment required to  
2 replace aging and failing water mains and service lines within the Company's  
3 Pinal Valley water system over the first ten year construction phase would cost  
4 nearly \$41 million. Together, these two groups account for \$108 million of  
5 infrastructure replacement costs.

6 **Q. DOES THE \$108 MILLION REPRESENT THE COMPANY'S ENTIRE AGING**  
7 **AND FAILING WATER MAIN AND SERVICE LINE REPLACEMENT NEEDS?**

8 A. No. The Company is developing a similar report for its Northern Group and  
9 anticipates those costs to be approximately \$25-30 million, placing the  
10 Company's total infrastructure replacement needs between \$133 and \$138  
11 million. These totals are in addition to the routine and necessary utility plant  
12 investments which the Company plans for and constructs annually.

13 **Q. HOW IS THE COMPANY PROPOSING TO IMPLEMENT THE \$67 MILLION**  
14 **INVESTMENT TO REPLACE AGING AND FAILING WATER MAINS AND**  
15 **SERVICE LINES?**

16 A. As part of the Company's analysis and report that was completed and submitted  
17 with its rate case application, it developed a specific and detailed three-year plan  
18 comprising 52 water main and service line replacement projects totaling \$9.4  
19 million. The three-year plan is the first step toward replacing the aging and failing  
20 water mains and service lines in the Superstition, Cochise and Falcon Valley  
21 systems.

22 **Q. DO YOU AGREE THAT COMMISSION STAFF AND INTERVENORS WILL**  
23 **NOT HAVE THE OPPORTUNITY TO LOOK CLOSELY AT THE PLANT**  
24 **ADDITIONS BEING PLACED IN SERVICE?**

25 A. No. The Company's DSIC proposal was patterned after the ACRM, which  
26 expressly provides Commission Staff and intervenors ample opportunity to  
27 review costs and to make whatever other investigations they deem necessary to  
28 conclude that the plant additions are necessary and prudent.

1 **Q. WILL THERE BE SIGNIFICANT TRANSMISSION AND DISTRIBUTION**  
2 **MAINTENANCE EXPENSE SAVINGS AS A RESULT OF THESE**  
3 **INFRASTRUCTURE REPLACEMENTS?**

4 A. No. The Company has identified over 371,000 feet of water mains and 3,850  
5 failing plastic service lines and 4,915 service lines on failing water mains that  
6 have reached the end of their useful lives and need to be replaced. The  
7 Company has proposed an aggressive three-year plan to begin to replace these  
8 failing water mains and service lines; however, even with this aggressive plan it  
9 will still take over thirty years to replace the 371,000 feet of failing water mains  
10 identified in the study, and sixteen years to replace the 3,850 failing plastic  
11 service lines and 4,915 service lines on failing water mains. During the time  
12 needed to make these replacements, the remaining water mains will continue  
13 to age and will begin to experience the same types of age-related  
14 maintenance issues and increasing breaks and leaks as the water mains that are  
15 already identified for replacement.

16 **Q. STAFF HAS PROPOSED AN ALTERNATIVE TO THE DSIC, THE**  
17 **SUSTAINABLE WATER LOSS IMPROVEMENT PROGRAM ("SWIP"). IS**  
18 **THIS A SATISFACTORY SUBSTITUTE FOR THE DSIC?**

19 A. No. Staff's proposal offers no regulatory rate relief. If adopted, it would simply  
20 allow the Company to defer depreciation expense for 24 months and to accrue  
21 an Allowance for Funds Used During Construction ("AFUDC") for 24 months.  
22 These deferrals are then subject to full regulatory review in a subsequent rate  
23 case and, if allowed, will then be amortized over 10 years. Staff's proposal is a  
24 step backward because it would delay recovery of the cost of service and lead to  
25 sharp increases in rates. More importantly, unlike the DSIC, Staff's proposal is  
26 not "credit supportive" in that it provides no additional cash flows necessary to  
27 attract capital. Without increased cash flows, the Company will be unable to  
28 increase its historical rates of infrastructure replacement.

1 **Q. WHY IS IT NECESSARY THAT THE MECHANISM BE CREDIT SUPPORTIVE?**

2 A. As explained by Ms. Ahern in Sections III and IV of her rebuttal testimony, capital  
3 expenditures as large as those anticipated by the Company require significant  
4 financing. If the Company is unable to raise capital, it will be nearly impossible to  
5 invest in needed infrastructure. In order to raise capital, a credit supportive  
6 mechanism is necessary. A credit supportive mechanism is one that mitigates  
7 the negative effect that regulatory lag has on cash flows. This type of  
8 mechanism, when coupled with the ability to earn a sufficient rate of return, will  
9 help enable the Company to fund the construction of these significant and much-  
10 needed infrastructure replacements with a mixture of debt, equity and internally-  
11 generated funds, thereby avoiding the large swings in debt ratio and the disparity  
12 between earned and authorized returns depicted in the chart above. As stated  
13 above, to the extent the Company's ability to earn its authorized return is  
14 impaired, its financial integrity and ability to fund infrastructure projects are  
15 further compromised.

16 **III. Rate Consolidation**

17 **Q. DO YOU AGREE WITH STAFF'S RECOMMENDATION TO MAINTAIN SAN**  
18 **MANUEL, ORACLE AND SADDLEBROOKE RANCH AS STAND ALONE**  
19 **SYSTEMS?**

20 A. No. As discussed in my direct testimony, the Company has shown that these  
21 systems, which are in close proximity to each other and share common  
22 management, operating employees and customer service, fall within the guiding  
23 principles of consolidation identified in the Company's consolidation study  
24 docketed with the Commission and should be consolidated. Oracle and  
25 SaddleBrooke Ranch are physically interconnected and share water production  
26 and pumping resources. Staff witness Elijah O. Abinah, in his direct testimony in  
27 the Company's last general rate case, offered the following concerning  
28 interconnected systems:

1           **"Q. When a company is physically interconnected, is it**  
2           **appropriate to have a STP<sup>2</sup>?"**

3           **"A. Yes. Staff believes that, when a company is physically**  
4           **interconnected, an STP is appropriate."**

5           Therefore, according to Staff's own guidelines regarding rate  
6           consolidation, as set forth by the Assistant Director of the Commission's Utilities  
7           Division, these systems should be consolidated.

8           **Q. WHAT WERE STAFF'S REASONS FOR REJECTING THE FALCON**  
9           **VALLEY CONSOLIDATION?**

10          A. Staff states that it is rejecting consolidation of these systems because of the  
11          adverse impacts to San Manuel and SaddleBrooke Ranch customers associated  
12          with consolidation. However, Staff offered no evidence or explanation identifying  
13          any such impacts. It is difficult to analyze Staff's position on this issue because  
14          Staff's rate design fails to generate the revenue increase it recommends.  
15          However, in SaddleBrooke Ranch, Staff is recommending a revenue increase of  
16          \$126,882 which represents an increase of 108.35 percent over current revenues.  
17          In the Company's rebuttal testimony, the Company is recommending  
18          consolidated rates that would result in an increase of only 28.3 percent for  
19          customers in SaddleBrooke Ranch, which is several times less than Staff's  
20          recommendation.

21          **Q. WHAT IS RUCO'S POSITION ON THE FALCON VALLEY CONSOLIDATION?**

22          A. RUCO supports the consolidation of these three systems, concluding that "the  
23          Company proposed consolidation will not result in any economic harm to the  
24          ratepayers served by those operating systems"<sup>3</sup>.

25  
26  
27          <sup>2</sup> Single Tariff Pricing (STP") the use of a unified rate structure for multiple utility systems that are owned and  
operated by a single utility, but that may or may not be contiguous or physically interconnected.

28          <sup>3</sup> Direct Testimony of William A. Rigsby, page 15, lines 9-11

**IV. Off-Site Facilities Fee**

**Q. DOES THE COMPANY AGREE WITH STAFF'S REVISION TO THE TARIFF LANGUAGE OF THE OFF-SITE FACILITIES FEE?**

A. Yes. The tariff language proposed by Staff is identical to that agreed to by all parties in the Company's Western Group general rate case settlement agreement.

**Q. DOES THE COMPANY AGREE WITH STAFF'S REVISION TO THE AMOUNT OF THE OFF-SITE FACILITIES FEE?**

A. No. The Company's calculation incorporated estimates of construction costs that would increase until the time that sufficient funds were available to construct the plant. Staff also did not address or consider the effects of delaying such construction; such as the need to add additional water supplies during the time that new customers receive service, but for which no additional supplies are available.

**Q. DID THE COMPANY PREPARE A TIMELINE THAT SHOWED HOW LONG IT WOULD TAKE TO ACCUMULATE SUFFICIENT FUNDS TO CONSTRUCT THE SUPERSTITION CAP TREATMENT PLANT?**

A. Yes. Exhibit JDH-7, included in my direct testimony, shows the projected construction cost as well as the amount of fees collected.

**Q. IF THE AMOUNT OF THE FEE IS LOWERED TO THE LEVEL PROPOSED BY STAFF, WILL THE COMPANY BE ABLE TO CONSTRUCT THE SUPERSTITION CAP TREATMENT PLANT BY 2028, AS SHOWN IN EXHIBIT JDH-7?**

A. No. Based on the Company's growth projections, fees collected at Staff's rates would be only \$5.7 million, compared to a projected required construction cost of \$13.4 million.

**Q. DID THE COMPANY USE THIS SAME METHODOLOGY IN ITS PROPOSAL FOR AN OFF-SITE FACILITIES FEE IN DOCKET NO. W-01445A-10-0517?**



1 A. Yes. The Company used the same methodology to project customers and  
2 construction costs.

3 **Q. WAS THIS APPROACH ACCEPTED BY STAFF IN THAT DOCKET?**

4 A. Yes. The Company's proposed fee was part of the Settlement Agreement signed  
5 by all parties, including Staff.

6 **Q. IF CUSTOMER GROWTH OCCURS MORE RAPIDLY, COULD THE**  
7 **COMPANY POTENTIALLY OVER-COLLECT THE AMOUNT OF THE COST**  
8 **OF CONSTRUCTING THE SUPERSTITION CAP TREATMENT PLANT?**

9 A. No. If customer growth occurred more quickly than projected, the contemplated  
10 facilities could be constructed ahead of schedule. The tariff provides for the fee  
11 to be discontinued once sufficient fees have been collected.

12 **Q. WHAT DO YOU RECOMMEND?**

13 A. That the Commission approve the amount of Off-Site Facilities Fee proposed by  
14 the Company.

15 **Q. DOES THAT CONCLUDE YOUR REBUTTAL TESTIMONY?**

16 A. Yes.  
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28

**ARIZONA WATER COMPANY**



**Docket No. W-01445A-11-0310**

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**2011 RATE HEARING**

**For Test Year Ending 12/31/10**

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**PREPARED  
REBUTTAL TESTIMONY & EXHIBITS  
OF  
JOEL M. REIKER**

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# TABLE OF CONTENTS

I.	Introduction .....	4
II.	Revenue Requirement .....	5
III.	Rate Base .....	6
	Response to the Direct Testimony of Staff Witness Jeffrey M. Michlik.....	7
	Staff Rate Base Adjustment No. 1 – Retire Plant No Longer in Service .....	7
	Staff Rate Base Adjustment No. 2 – Capitalize Water Testing Expense .....	8
	Staff Rate Base Adjustment No. 3 – Working Cash.....	8
	Response to the Direct Testimony of RUCO Witness Robert B. Mease .....	10
	RUCO Rate Base Adjustment No. 1 – True-up Post Test Year Plant.....	10
	RUCO Rate Base Adjustment No. 2 – Utility Plant Reconciliation .....	10
	RUCO Rate Base Adjustment No. 3 - Working Cash .....	11
	Other Rate Base Issues .....	12
	Updated Working Cash – Rebuttal .....	12
IV.	Income Statement.....	13
	Response to the Direct Testimony of Staff Witness Jeffrey M. Michlik.....	13
	Staff Income Statement Adjustment No. 1 – Unbilled Expenses .....	13
	Staff Income Statement Adjustment No. 2 – Fleet Fuel Expenses .....	13
	Staff Income Statement Adjustment No. 3 – Pumping and T&D Maintenance Expenses .....	15
	Staff Income Statement Adjustment No. 4 – Water Testing Expense.....	20
	Staff Income Statement Adjustment No. 5 – BMP Expenses .....	21
	Staff Income Statement Adjustment No. 6 – Rate Case Expense .....	21
	Staff Income Statement Adjustment No. 7 – Depreciation Expense .....	28
	Staff Income Statement Adjustment No. 8 – Income Tax Expense .....	30
	Staff Income Statement Adjustment No. 9 – Property Tax Expense.....	30
	Response to the Direct Testimony of RUCO Witness Mease .....	31
	RUCO Income Statement Adjustment No. 1 – Pumping and T&D Maintenance Expenses .....	31
	RUCO Income Statement Adjustment No. 2 – Rate Case Expense .....	33
	RUCO Income Statement Adjustment No. 3 – Fleet Fuel Expense .....	33
	RUCO Income Statement Adjustment No. 4 – Miscellaneous Expense .....	34
	RUCO Income Statement Adjustment No. 5 – Depreciation Expense.....	34
	RUCO Income Statement Adjustment No. 6 – Property Taxes.....	34
	Additional Operating Expense Pro Forma Adjustments .....	35
	Company Rebuttal Income Statement Adjustment IS-5 – Purchased Water Expense (San Manuel) .....	35
V.	Rate Design .....	36

1	Updated Cost of Service Study ("COSS") and Proposed Rate Design .....	36
2	Response to the Direct Testimony of Staff Witness Bentley Erdwurm .....	37
3	Full Rate Consolidation.....	37
4	Revenue Allocation among Classes .....	37
5	Allocation of Revenues between Fixed Charges & Commodity Rates.....	37
6	Staff's Proposed Miscellaneous Service Charges .....	38
7	Declining Usage Rate Design/Normalization of Billing Determinants .....	38
8	Response to the Direct Testimony of RUCO Witness William A. Rigsby .....	40
9	Rate Consolidation .....	40
10	Declining Usage Rate Design/Normalization of Billing Determinants .....	41
11	Response to the Direct Testimony of RUCO Witness Robert B. Mease .....	41
12	Rate Design .....	41

## EXHIBITS

13	Standard Filing Rebuttal Schedules.....	JMR-RB1
14	Company Response to Staff Data Request JMM 9.2 .....	JMR-RB2
15	Company Supplemental Response to Staff Data Request JMM 2.45.....	JMR-RB3
16	U.S. Energy Information Administration Short-Term Energy Outlook .....	JMR-RB4
17	Company Response to RUCO Data Request 1.27 .....	JMR-RB5
18	Company Response to RUCO Data Request 1.29 .....	JMR-RB6
19	San Manuel Purchased Water Rate .....	JMR-RB7

# ARIZONA WATER COMPANY

## Rebuttal Testimony of Joel M. Reiker

### I. Introduction

**Q. PLEASE STATE YOUR NAME, EMPLOYER, AND TITLE.**

A. My name is Joel M. Reiker. I am employed by Arizona Water Company (the "Company") as Vice President – Rates and Revenues.

**Q. ARE YOU THE SAME JOEL M. REIKER THAT PREVIOUSLY PROVIDED DIRECT TESTIMONY IN THIS PROCEEDING?**

A. Yes.

**Q. HAVE YOU REVIEWED THE DIRECT TESTIMONY FILED BY THE OTHER PARTIES TO THIS PROCEEDING?**

A. Yes. I have reviewed the testimony of each of the witnesses of the Arizona Corporation Commission's ("Commission") Utilities Division Staff ("Staff") and the Residential Utility Consumer Office ("RUCO").

**Q. WHAT IS THE PURPOSE OF YOUR REBUTTAL TESTIMONY?**

A. The purpose of my rebuttal testimony is to respond to the direct testimony of Staff witnesses Jeffrey M. Michlik and Bentley Erdwurm, and RUCO witnesses William A. Rigsby and Robert B. Mease.

**Q. HOW IS YOUR TESTIMONY ORGANIZED?**

A. My testimony is presented in five sections, including this introductory Section I. In Section II, I present the Company's updated revenue requirement. In Section III, I address the rate base and respond to the direct testimony of Staff witness Mr. Michlik and RUCO witness Mr. Mease regarding this issue. In Section IV, I address the income statement and respond to Staff witness Mr. Michlik and RUCO witness Mr. Mease regarding this issue. In Section V, I address the rate

design and respond to Staff witness Mr. Erdwurm and RUCO witnesses Messrs. Rigsby and Mease.

**II. Revenue Requirement**

**Q. PLEASE SUMMARIZE THE COMPANY'S PROPOSED REVENUE REQUIREMENT AND ASSOCIATED INCREASE AT THIS STAGE OF THE PROCEEDING, AS WELL AS THOSE OF STAFF AND RUCO.**

**A.** The proposed revenue requirements of the parties are summarized in the following table:

**PROPOSED REVENUE REQUIREMENTS**

System	Company Rebuttal	Staff Direct	RUCO Direct
Superstition	\$18,983,549	\$16,862,038	\$17,208,024
Cochise	4,008,556	3,639,678	3,701,453
San Manuel	1,223,565	1,227,957	1,258,405
Oracle	1,120,928	1,001,991	1,028,045
SaddleBrooke	244,673	243,985	222,600
Winkelman	133,953	116,941	121,149
Total Eastern Group	\$25,715,224	\$23,092,590	\$23,539,676

The proposed revenue requirements shown in the above table do not reflect any revenue shifting that would result from the implementation of consolidated rate designs. The Company has filed updated standard filing Rebuttal Schedules (A-1 through H-4) detailing the Company's rebuttal adjustments, updated revenue requirements and proposed rate design in Rebuttal Exhibit JMR-RB1. The parties' proposed revenue increases at this stage of the proceeding are shown below:

**PROPOSED REVENUE INCREASES/(DECREASES)**

System	Company Rebuttal	Staff Direct	RUCO Direct
Superstition	\$3,927,383	\$1,805,872	\$2,151,858
Cochise	705,007	336,129	397,905
San Manuel	276,037	280,429	310,877
Oracle	130,819	11,882	37,934
SaddleBrooke	127,571	126,882	105,498
Winkelman	31,855	14,843	19,050
Total Eastern Group	\$5,198,671	\$2,576,037	\$3,023,122

The proposed revenue increases shown in the table above do not reflect any revenue shifting that would result from the implementation of consolidated rate designs. Such revenue shifting is reflected on line 21 of Schedule A-1 Rebuttal (See Exhibit JMR-RB1) for the San Manuel, Oracle and SaddleBrooke systems, which the Company proposes to consolidate into a new rate system known as Falcon Valley.

**III. Rate Base**

**Q. PLEASE SUMMARIZE THE COMPANY'S, STAFF'S AND RUCO'S PROPOSED RATE BASES AT THIS STAGE OF THE PROCEEDING.**

**A.** The parties' proposed rate bases are shown in the following table:

**PROPOSED RATE BASE**

System	Company Rebuttal	Staff Direct	RUCO Direct
Superstition	\$50,432,117	\$50,303,626	\$50,029,487
Cochise	8,425,690	8,497,455	8,361,674
San Manuel	2,014,751	2,037,357	1,998,819
Oracle	2,497,996	2,453,855	2,474,853
SaddleBrooke	(116,014)	(114,888)	(175,628)
Winkelman	306,390	304,956	304,727
Total Eastern Group	\$63,560,931	\$63,482,361	\$62,993,932

**Q. HOW DOES THE COMPANY PROPOSE TO CALCULATE THE REQUIRED OPERATING INCOME FOR THE SADDLEBROOKE RANCH SYSTEM GIVEN THE FACT THAT IT HAS NEGATIVE RATE BASE, AS SHOWN IN THE ABOVE TABLE?**

1 A. Because the SaddleBrooke Ranch system has negative rate base, determining  
2 the required level of operating income by multiplying the required rate of return  
3 by the rate base would result in rate levels that are designed to produce an  
4 operating loss. In order to avoid a situation where a utility is required to operate  
5 at a loss, the Company proposes that rates in the SaddleBrooke Ranch system  
6 be based on the assumption of zero operating income. This is the same  
7 approach taken by Staff in its direct testimony.

8 **Q. HAS RUCO TAKEN THE SAME APPROACH?**

9 A. No. As shown on Schedule RBM-1 of RUCO witness Mr. Mease's direct  
10 testimony, RUCO recommends that rates in the SaddleBrooke Ranch system be  
11 set at a level which produces a loss.

12 **Q. DO YOU AGREE WITH RUCO'S APPROACH?**

13 A. No. Although the Company's original application reflected negative operating  
14 income for the SaddleBrooke Ranch system, it is my understanding that the  
15 Commission does not generally require utilities with negative rate base to  
16 operate at a loss. Staff's direct testimony reflects this ratemaking treatment.  
17 Accordingly, the Company has incorporated this treatment into its proposal, as  
18 reflected in Exhibit JMR-RB1.

19 **Response to the Direct Testimony of Staff Witness Jeffrey M. Michlik**

20 *Staff Rate Base Adjustment No. 1 – Retire Plant No Longer in Service*

21 **Q. WHAT IS STAFF RATE BASE ADJUSTMENT NO. 1?**

22 A. According to pages 12 (lines 20 – 26) and 13 (lines 1 – 8) of Mr. Michlik's direct  
23 testimony, Staff claims that two wells in the Superstition system (Miami Wells No.  
24 8 and 17) that were out of service during the Test Year. Staff recommends that  
25 these wells be retired, and proposes to do so by crediting Utility Plant in Service  
26 ("UPIS") by an amount equal to the total original cost of these wells, \$46,890,  
27 and debiting Accumulated Depreciation by the same amount.



1 **Q. DOES THE COMPANY ACCEPT STAFF'S ADJUSTMENT?**

2 A. No. Only one of these wells, Miami Well No. 8, is currently out of service and  
3 should be retired. As explained by Company witness Mr. Schneider in his  
4 rebuttal testimony, the submersible pump and motor at Miami Well No. 17 was  
5 replaced in March 2012 and the well is currently in service. A copy of the  
6 proposal/contract to repair this well was provided in response to Staff data  
7 request JMM 9-2 on February 13, 2012 (See Exhibit JMR-RB2). Because Miami  
8 Well No. 17 is currently in service, the Company only accepts the portion of Staff  
9 Rate Base Adjustment No. 1 related to Miami Well No. 8, the original cost of  
10 which is \$9,354. Thus, the Company will accept a pro forma adjustment to credit  
11 UPIS and debit Accumulated Depreciation by \$9,354.

12 *Staff Rate Base Adjustment No. 2 – Capitalize Water Testing Expense*

13 **Q. DOES THE COMPANY ACCEPT STAFF RATE BASE ADJUSTMENT NO. 2**  
14 **TO CAPITALIZE \$9,510 IN WATER TESTING EXPENSES IN THE**  
15 **SADDLEBROOKE RANCH SYSTEM?**

16 A. Yes. As explained by Staff witness Mr. Michlik on page 13 (lines 10 – 21) of  
17 his direct testimony, these costs relate to the initial startup of a well in the  
18 SaddleBrooke Ranch system, which were erroneously charged to water testing  
19 expense in the San Manuel system. Because these initial/startup costs are  
20 nonrecurring in nature, they are appropriately capitalized and charged to UPIS.  
21 Staff Income Statement Adjustment No. 13 (San Manuel system), discussed  
22 below in Section IV of my rebuttal testimony, is the countervailing adjustment to  
23 Staff Rate Base Adjustment No. 2.

24 *Staff Rate Base Adjustment No. 3 – Working Cash*

25 **Q. WHAT IS STAFF RATE BASE ADJUSTMENT NO. 3?**

26 A. Staff Rate Base Adjustment No. 3 is an adjustment to reduce working cash in the  
27 Eastern Group by \$321,728. Staff arrives at its adjustment by revising the  
28

Company's lead/lag study to reflect Staff's adjusted levels of expenses and by removing the entire cost associated with common equity from the calculation.

**Q. DOES THE COMPANY ACCEPT STAFF RATE BASE ADJUSTMENT NO. 3?**

A. No, the Company does not accept Staff's adjustment.

**Q. DOES THE COMPANY AGREE THAT ITS LEAD/LAG STUDY AND, ULTIMATELY, ITS WORKING CASH ALLOWANCE SHOULD REFLECT THE ADJUSTED LEVELS OF EXPENSES ADOPTED BY THE COMMISSION IN THIS PROCEEDING?**

A. Yes. However, to the extent the Company does not agree with Staff's proposed expense levels, which I address below in Section IV of my rebuttal testimony, the Company does not accept Staff's recommended working cash allowance.

**Q. WHY DID THE COMPANY INCLUDE AN EQUITY COST COMPONENT IN ITS LEAD/LAG STUDY?**

A. The Company included the equity cost component of operating income in its calculation of required working cash for the sake of consistency. In recent years, both Staff and RUCO have made a practice of including the debt cost component of operating income in the calculation of required working cash. However, if the cost associated with the debt component of operating income is included in the calculation of required working cash, then a corresponding adjustment to include the cost associated with the equity component should be made as well. The cost associated with equity is as much a cost of providing service as the cost associated with debt, and the Company should be compensated for the additional investment related to the time it must wait to recover this cost. The equity portion of the cost of capital should be recognized in the lead/lag study with a full revenue lag and a zero payment lead.

**Q. IS IT THE COMPANY'S POSITION THAT IF ONE COMPONENT OF THE OPERATING INCOME IS RECOGNIZED IN THE CALCULATION OF**

1       **REQUIRED WORKING CASH, THEN ALL COMPONENTS SHOULD BE**  
2       **RECOGNIZED?**

3   A.   Yes. The *entire* amount of a utility's operating income finances its rate base.  
4       Because an appropriate estimate of the required working cash associated with  
5       this operating income (which includes both the debt and equity components) has  
6       little effect on the rate base of a utility with a well-balanced capital structure, the  
7       Company is indifferent to its inclusion in the lead/lag study. However, if only the  
8       portion due creditors is included in the lead/lag study and the portion due  
9       shareholders is ignored, the measurement of a utility's total rate base will be far  
10      less accurate than if operating income had been excluded from the lead/lag study  
11      altogether. In other words, the Company should not be penalized, as Staff and  
12      RUCO propose to do, for maintaining a balanced capital structure.

13      **Response to the Direct Testimony of RUCO Witness Robert B. Mease**

14      *RUCO Rate Base Adjustment No. 1 – True-up Post Test Year Plant*

15   Q.   **WHAT IS RUCO RATE BASE ADJUSTMENT NO. 1?**

16   A.   RUCO Rate Base Adjustment No. 1 is an adjustment to true-up Post-Test Year  
17       plant to reflect the actual costs incurred by the Company for each project in  
18       the Eastern Group. As explained by RUCO witness Mr. Mease on page 11 (lines  
19       4 – 11) of his direct testimony, the Company's original application included  
20       estimated costs for certain Post-Test Year plant projects. Throughout the course  
21       of discovery, the Company provided Staff and RUCO with the actual costs of  
22       these projects as they became available. RUCO Rate Base Adjustment No. 1  
23       reduces Post-Test Year plant by \$176,531, and reflects the Company's ability to  
24       efficiently complete these projects under budget.

25   Q.   **DOES THE COMPANY ACCEPT RUCO'S ADJUSTMENT?**

26   A.   Yes, it does.

27      *RUCO Rate Base Adjustment No. 2 – Utility Plant Reconciliation*

1 **Q. WHAT IS RUCO RATE BASE ADJUSTMENT NO. 2?**

2 A. RUCO Rate Base Adjustment No. 2 is a \$51,738 reduction to UPIS in the  
3 SaddleBrooke Ranch system. According to pages 11 (lines 12 – 19) and 12  
4 (lines 1 – 16) of Mr. Mease's direct testimony, RUCO requested, and the  
5 Company provided, plant additions, retirements and adjustments for each system  
6 in the Eastern Group. RUCO used this information to reconcile actual UPIS  
7 levels with those reported in the Company's application. The result of RUCO's  
8 analysis, an un-reconciled difference of \$51,738 in the SaddleBrooke Ranch  
9 system, is the basis of RUCO Rate Base Adjustment No. 2.

10 **Q. DOES THE COMPANY ACCEPT RUCO'S ADJUSTMENT?**

11 A. No. After reviewing the UPIS activity provided to Staff and RUCO in response to  
12 data requests, the Company discovered that it omitted all plant additions made in  
13 the SaddleBrooke Ranch system during 2007. Those 2007 plant additions  
14 account for the \$51,738 un-reconciled difference between the actual balance of  
15 UPIS calculated by RUCO, and the balance reported in the Company's  
16 application. Upon making this discovery, the Company promptly supplemented  
17 its response to Staff Data Request JMM 2.45 on March 16, 2012 (See Exhibit  
18 JMR-RB3), providing a breakdown of the \$51,738 in plant additions made in the  
19 SaddleBrooke Ranch system during 2007. The Company recognizes the error  
20 which resulted in RUCO's pro forma adjustment, and requests that RUCO  
21 withdraw its pro forma adjustment in light of the additional/supplemental  
22 information the Company already provided.

23 *RUCO Rate Base Adjustment No. 3 - Working Cash*

24 **Q. WHAT IS RUCO RATE BASE ADJUSTMENT NO. 3?**

25 A. RUCO Rate Base Adjustment No. 3 is similar to Staff Rate Base Adjustment No.  
26 3 in that RUCO has revised the Company's lead/lag study to reflect its own  
27 adjusted expenses. Like Staff, RUCO has also removed the entire cost  
28 associated with common equity from the calculation and, unlike Staff's

adjustment, RUCO has applied 46 net lag days to the payment of common stock dividends.

**Q. DOES THE COMPANY ACCEPT RUCO'S ADJUSTMENT?**

A. No. The Company does not accept this adjustment for the reasons discussed above with respect to Staff Rate Base Adjustment No. 3.

**Q. DO YOU AGREE WITH MR. MEASE'S ASSERTION ON PAGE 15 (LINES 8 – 12) OF HIS DIRECT TESTIMONY THAT STOCKHOLDERS ARE ONLY COMPENSATED WHEN THEY RECEIVE DIVIDEND PAYMENTS OR WHEN THEY SELL THEIR STOCK?**

A. No. I disagree with Mr. Mease's assertion that stockholders only receive compensation in the form of dividends or funds from the sale of their stock. Stockholders receive compensation in the form of a return (either positive or negative) on their investment in exchange for the risk they incur in making their capital available to the utility. This "compensation" is earned *every day* service is rendered, but the utility must wait approximately 30 days to collect the actual revenues. As I explained above, this 30-day waiting period represents an additional investment on behalf of shareholders. As a result, the Company cannot accept RUCO's proposal to include in the lead/lag study only dividend payments with a net 46-day expense lag.

**Other Rate Base Issues**

***Updated Working Cash – Rebuttal***

**Q. HAS THE COMPANY UPDATED ITS LEAD/LAG STUDY TO REFLECT ANY ADDITIONAL CHANGES OR ADJUSTMENTS MADE TO ITS TEST YEAR OPERATING EXPENSES AND OTHER COSTS AT THIS STAGE OF THE PROCEEDING?**

A. Yes. The Company's updated lead/lag study is shown in the Appendix to Schedule B-5 Rebuttal (See Exhibit JMR-RB1), and reflects the Company's adjusted Test Year expenses and capital costs at this stage of the proceeding.

1 **IV. Income Statement**

2 **Response to the Direct Testimony of Staff Witness Jeffrey M. Michlik**

3 *Staff Income Statement Adjustment No. 1 – Unbilled Expenses*

4 **Q. WHAT IS STAFF INCOME STATEMENT ADJUSTMENT NO. 1?**

5 A. Staff Income Statement Adjustment No. 1 decreases Test Year operating  
6 expenses in the Eastern Group by \$57,470 by adding back the Company's net  
7 unbilled expense accounting accruals, which the Company removed in its  
8 application by proposing Income Statement Adjustment IS-2, discussed on page  
9 11 (lines 1 – 13) of my direct testimony.

10 **Q. DOES THE COMPANY ACCEPT STAFF INCOME STATEMENT**  
11 **ADJUSTMENT NO. 1?**

12 A. Yes, the Company accepts Staff's adjustment.

13 *Staff Income Statement Adjustment No. 2 – Fleet Fuel Expenses*

14 **Q. WHAT IS STAFF INCOME STATEMENT ADJUSTMENT NO. 2?**

15 A. Staff Income Statement Adjustment No. 2 recalculates the Company's pro forma  
16 adjustment related to the cost of gasoline used to operate its fleet of service  
17 vehicles (Income Statement Adjustment IS-15). According to page 19 (lines 13 –  
18 14) of Mr. Michlik's direct testimony, Staff recalculated the Company's pro forma  
19 adjustment by applying the average cost of gasoline for the 12 months ending  
20 December 2011, thereby reducing the Company's pro forma adjustment, which  
21 relied on the prevailing price of gasoline as of April 2011, by a total of \$18,895 in  
22 the Eastern Group.

23 **Q. DOES THE COMPANY ACCEPT STAFF'S ADJUSTMENT?**

24 A. No. The Company does not accept Staff's adjustment because the price of  
25 gasoline has risen significantly higher than the 12-month average price of \$3.38  
26 per gallon that Staff relied upon when recalculating the Company's pro forma  
27 adjustment. In fact, on the date Staff and RUCO filed their direct testimony in  
28 this proceeding, March 13, 2012, the actual price of regular gasoline in Arizona

1 averaged \$3.851 per gallon, \$0.67 higher than what Mr. Michlik reports was the  
2 "current" price of gasoline (\$3.18 per gallon) on page 19 (lines 10 – 11) of his  
3 direct testimony. This difference represents an actual cost of providing service in  
4 the Eastern Group that is over \$30,000 higher than what Staff recommends the  
5 Company be allowed to recover in this proceeding.

6 **Q. WHAT PRICE PER GALLON OF GASOLINE DID THE COMPANY USE WHEN**  
7 **CALCULATING ITS ORIGINAL PRO FORMA ADJUSTMENT?**

8 A. The Company relied on a price of \$3.671 per gallon which, as stated above, was  
9 the average price of regular gasoline in Arizona as of April 19, 2011. As of  
10 March 20, 2012, the average price had risen to \$3.887 per gallon, an increase of  
11 \$0.216 per gallon, representing over \$14,000 in additional costs above the level  
12 proposed by the Company in its application.

13 **Q. ARE PER-GALLON GASOLINE PRICES EXPECTED TO DECREASE TO**  
14 **THE LEVEL UTILIZED BY STAFF IN RECALCULATING THE COMPANY'S**  
15 **PRO FORMA ADJUSTMENT?**

16 A. No. Contrary to Staff's assertion, the price of gasoline is expected to remain at a  
17 level that is significantly higher than the average price per gallon during the 12  
18 months ending December 2011. According to the U.S. Energy Information  
19 Administration's ("EIA") March 6, 2012, Short-Term Energy Outlook, the average  
20 price of regular gasoline in the U.S. is expected to average \$3.79 and \$3.72 per  
21 gallon in 2012 and 2013, respectively, compared to \$3.53 per gallon in 2011:

22  
23 EIA expects regular-grade motor gasoline retail prices to  
24 average \$3.79 per gallon in 2012 and \$3.72 per gallon in  
25 2013, compared with \$3.53 per gallon in 2011. During the  
26 April through September summer driving season this year,  
27 prices are forecast to average about \$3.92 per gallon with a  
28 peak monthly average price of \$3.96 per gallon in May (See  
Exhibit JMR-RB4).

1 Assuming the average price of gasoline in Arizona remains approximately  
2 4 percent below the national average (as was the case during 2011), the  
3 Company's original pro forma adjustment, including the fuel cost assumptions  
4 upon which it was based, is more reasonable than Staff's adjustment. Given the  
5 known and measurable evidence concerning current gasoline prices discussed  
6 above and the available information concerning future prices provided in Exhibit  
7 JMR-RB4, the Commission should adopt the Company's original fleet fuel  
8 adjustment in this proceeding.

9 *Staff Income Statement Adjustment No. 3 – Pumping and T&D Maintenance*  
10 *Expenses*

11 **Q. WHAT IS STAFF INCOME STATEMENT ADJUSTMENT NO. 3?**

12 A. Staff Income Statement Adjustment No. 3 reverses the Company's adjustment to  
13 normalize Pumping and Transmission & Distribution ("T&D") maintenance  
14 expenses (Income Statement Adjustment IS-11). Staff's adjustment reduces  
15 total operating expenses in the Eastern Group by \$548,218.

16 **Q. WHAT BASIS DOES STAFF PROVIDE FOR REVERSING THE COMPANY'S**  
17 **ADJUSTMENT?**

18 A. According to Mr. Michlik on page 21 (lines 4 – 9) of his direct testimony, Staff  
19 does not believe the Company's pro forma Pumping and T&D maintenance  
20 expenses are known or measurable and disagrees (lines 13 – 21) with the  
21 regression analysis of historical costs the Company used to arrive at a  
22 normalized level of Pumping and T&D maintenance expenses. Finally, Staff  
23 concludes, on page 22 (line 18) of Mr. Michlik's direct testimony, that the Test  
24 Year levels of Pumping and T&D maintenance expenses were not abnormally  
25 low.

26 **Q. HOW DO YOU RESPOND TO STAFF'S CLAIM THAT THE ESTIMATES**  
27 **UPON WHICH THE COMPANY BASED ITS PRO FORMA PUMPING AND T&D**  
28 **MAINTENANCE EXPENSES ARE NOT KNOWN AND MEASURABLE?**

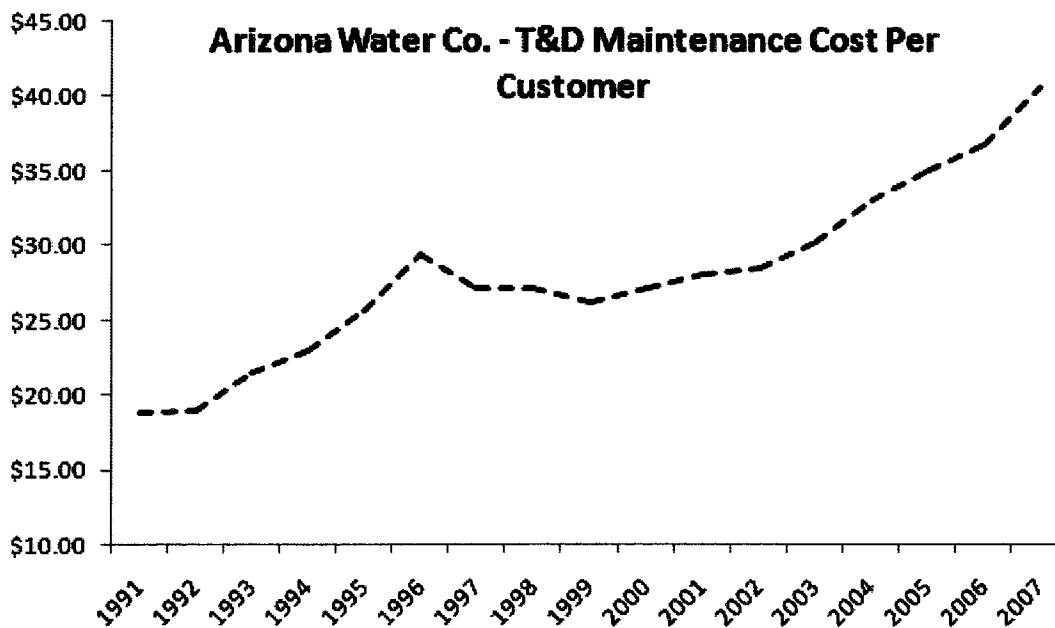


1 A. The Commission should find that the known and measurable standard is met  
2 when, as in this case, the Company provides analytical evidence of a known and  
3 documented pattern of change. Given the documented long-term pattern of  
4 increasing infrastructure-related costs and the general consensus that water  
5 utilities operate in a rising cost industry, the Company's pro forma Pumping and  
6 T&D maintenance expenses are clearly known and measurable. The authors of  
7 *Accounting for Public Utilities* provide further explanation of this standard:

8  
9 The idea of a known change in the ratemaking framework  
10 should not be that the change is in an absolute or  
11 unchangeable form, **but rather that there is a known**  
12 **condition or a known pattern of change in the**  
13 **operations.** While the term "known change" may suggest  
14 something in the past, it is generally not so limited by  
15 regulators. For example, the rationale for allowing  
16 adjustments for prospective wage increases which are under  
17 a contractual arrangement is that contractual agreements  
18 have a high probability of occurring. The problem of inflation  
19 and its impact on a company's various operating costs has  
20 just as high a degree of probability as has the wage  
21 agreement. In basic character, no difference exists.  
22 Regulators "know" that the wages will be increased. They  
23 should "know" that various non-contractual areas of costs  
24 incurred by the utility will also increase. There is no  
25 reason to believe that wage contracts will not be fulfilled, and  
26 similarly there may be no reason to believe that inflation  
27 patterns are going to change significantly in the time frame  
28 used for setting rates. **The "known" quality applies**  
**equally to activities with contracted price adjustments**  
**and those activities faced with general price changes.**<sup>1</sup>  
(emphasis added)

23 Such a "known" condition or pattern of change in operations is illustrated  
24 in the following chart of T&D maintenance costs over time:  
25  
26  
27  
28

<sup>1</sup> Hahne, Robert L., Gregory E. Aliff & Deloitte & Touche LLP. *Accounting for Public Utilities*. 2004. p. 7-10.



The pattern shown in the chart above is consistent with, and conforms to, the consensus that water utilities operate in a rising-cost industry. Additional evidence supporting this consensus includes the fact that water utilities generally seek rate increases, rather than decreases.

**Q. WHAT ARGUMENT DOES MR. MICHLIK MAKE REGARDING THE REGRESSION ANALYSIS PERFORMED BY THE COMPANY FOR THE PURPOSE OF CALCULATING ITS ADJUSTMENT?**

A. On page 21 (lines 13 – 14) of his direct testimony, Mr. Michlik claims the regression analysis performed by the Company is invalid on statistical grounds, and that a more appropriate analysis would have only examined the four years ending with the Test Year, rather than the 11 years utilized by the Company in its analysis.

**Q. WOULD A FOUR-YEAR REGRESSION ANALYSIS BE APPROPRIATE?**

A. No. On pages 16 (lines 4 – 27) and 17 (lines 1 – 5) of my direct testimony I explained how, as a result of cost-cutting measures implemented by the Company in 2008, the Test Year levels of Pumping and T&D maintenance expenses were abnormally low and not representative of the level of costs that

1 would be prudently incurred going forward. As a result, a statistical analysis of  
2 the four years ending with the Test Year tells the Commission nothing about the  
3 long-term pattern of infrastructure-related costs. The appropriate statistical  
4 method of measuring this long-term pattern for purposes of calculating a  
5 normalizing adjustment is to perform some type of time-series analysis, such as  
6 the regression analysis performed by the Company, which captures the time  
7 period in which the trend is present. Analyzing only the four-year period ending  
8 with the Test Year would simply show the extent to which the Company has  
9 temporarily cut costs, and fails to account for the fact that infrastructure-related  
10 costs exhibit a long-term increasing trend.

11 The Company's analysis is a conservative analysis in that it examined all  
12 years from 2000 through 2010, including the period when the Company was  
13 actively cutting its costs, and therefore does not exclude any abnormal years  
14 which would lower the regression coefficient and, consequently, the statistical  
15 validity and significance of the analysis. The Commission should not rely on  
16 Staff's analysis of only four years ending with the Test Year, years which were  
17 abnormally low.

18 **Q. DOES STAFF GENERALLY SUPPORT NORMALIZING ADJUSTMENTS?**

19 A. Yes. According to Mr. Michlik on page 22 (lines 9 – 14) of his direct testimony,  
20 "Staff usually performs a five-year historical analysis of operating expenses to  
21 identify accounts that are potential expense normalization candidates." He goes  
22 on to conclude that the Test Year levels of Pumping and T&D maintenance  
23 expenses were not abnormally low.

24 **Q. DO YOU AGREE WITH STAFF'S METHOD OF IDENTIFYING ABNORMALLY**  
25 **LOW OR HIGH EXPENSES?**

26 A. No. Staff's method of identifying abnormally high or low expenses by looking  
27 at five-years' worth of expense levels is over-simplified and leads to incorrect  
28 conclusions regarding certain classes of expenses, such as infrastructure-related

1 expenses, which increase over time. Despite the fact that Staff's own simplified  
2 method appears to identify the Company's Pumping and T&D maintenance  
3 expenses as candidates for normalization, Mr. Michlik chose not to normalize  
4 them.

5 **Q. HOW DID STAFF ARRIVE AT THE CONCLUSION THAT THE TEST YEAR**  
6 **LEVEL OF PUMPING AND T&D MAINTENANCE EXPENSES WERE NOT**  
7 **ABNORMALLY LOW?**

8 A. After acknowledging that Pumping and T&D maintenance expenses have  
9 exhibited a downward trend in recent years, Mr. Michlik states, on page 22 (lines  
10 19 – 20) of his direct testimony, that "a downward trend could represent improved  
11 operating efficiencies." But conversely, on pages 21 (lines 23 – 26) and 22 (line  
12 1) of his direct testimony, he suggests that the Company has not adequately  
13 maintained its pumping and T&D facilities. As I explained above, water utilities  
14 operate in a rising-cost industry. The Company has every intention of increasing,  
15 as needed, the level of resources devoted to maintenance. The cost-reduction  
16 efforts implemented by the Company beginning in 2008 were in response to a  
17 transitory economic cycle, and simply cannot be sustained without experiencing  
18 the types of long-term negative consequences cited by Mr. Michlik.

19 **Q. HOW DO YOU RESPOND TO MR. MICHLIK'S CLAIM ON PAGE 22 (LINES 1 –**  
20 **6) OF HIS DIRECT TESTIMONY THAT IMPLEMENTING COST-CUTTING**  
21 **MEASURES RATHER THAN CUTTING SHAREHOLDER DIVIDENDS "DOES**  
22 **NOT APPEAR TO PROVIDE EQUAL CONSIDERATION FOR RATEPAYERS**  
23 **AND SHAREHOLDERS?"**

24 A. I disagree. In fact, the Company's Board acted quickly in the first quarter of 2008  
25 to freeze dividends in an act that reflected its assessment of the economic  
26 environment at that time. The negative financial effects that can result from a  
27 decision to *cut* dividends can be more significant than any short-term, recession-  
28 related cost-cutting efforts. This, presumably, is why companies such as

1 Pinnacle West Capital (parent of Arizona Public Service Co.) and other Arizona  
2 utilities, while still filing rate cases, did *not* cut dividend payments in response to  
3 the economic downturn beginning in 2008.

4 **Q. WHAT IMPACT WILL STAFF'S RECOMMENDATION, IF ADOPTED BY THE**  
5 **COMMISSION, HAVE ON THE COMPANY AND ITS CUSTOMERS?**

6 A. As stated above, the Test Year levels of Pumping and T&D maintenance  
7 expenses were abnormally low and not representative of the level of costs that  
8 will be prudently incurred going forward. If Staff's recommendation is adopted by  
9 the Commission in this proceeding, rates will have been set below the cost of  
10 service, thereby limiting cash flow that would otherwise be available to either  
11 replace or repair aging infrastructure. Aside from the question of whether such  
12 rates would be fair and reasonable, this result is particularly troublesome for  
13 customers in light of Staff's recommendation, discussed on pages 32 (line 20)  
14 through 37 (line 23) of Mr. Michlik's direct testimony, that the Commission deny  
15 the Company's proposed Distribution System Improvement Charge ("DSIC") and  
16 instead authorize accounting deferral of the post-in-service capital costs  
17 associated with certain T&D system improvements. In Section X of his direct  
18 testimony, Company witness Mr. Schneider discussed the massive costs  
19 associated with replacing aging infrastructure in systems such as Bisbee and  
20 Miami. In light of the evidence presented by Mr. Schneider, which remains  
21 unchallenged, Staff's recommendations are, quite simply, a recipe for rate shock.  
22 This was a result that regulatory commissions in the 1970s intended to avoid  
23 when they took steps to avoid the abnormally high accumulation of construction  
24 financing costs (e.g., AFUDC) on massive construction projects, such as nuclear  
25 power plants.

26 *Staff Income Statement Adjustment No. 4 – Water Testing Expense*

27 **Q. WHAT IS STAFF INCOME STATEMENT ADJUSTMENT NO. 4?**

1 A. Staff Income Statement Adjustment No. 4 is a \$9,510 reduction to Water  
2 Treatment expense in the San Manuel system. As I discussed in Section II of my  
3 rebuttal testimony above (Staff Rate Base Adjustment No. 2), these costs relate  
4 to the initial startup of a well in the SaddleBrooke Ranch system that were  
5 erroneously charged to water testing expense in the San Manuel system.  
6 Because these initial/startup costs are nonrecurring in nature, they are  
7 appropriately reclassified and charged to UPIS.

8 **Q. DOES THE COMPANY ACCEPT STAFF'S ADJUSTMENT?**

9 A. Yes, it does.

10 *Staff Income Statement Adjustment No. 5 – BMP Expenses*

11 **Q. WHAT IS STAFF INCOME STATEMENT ADJUSTMENT NO. 5?**

12 A. Staff Income Statement Adjustment No. 5 reverses the Company's pro forma  
13 adjustment (Income Statement Adjustment IS-14) to recognize the incremental  
14 cost of implementing additional Best Management Practices ("BMP") in the  
15 Superstition system, as ordered by the Commission in Decision No. 71845, dated  
16 August 24, 2010. Staff's adjustment reduces Administrative & General expense  
17 in the Superstition system by \$6,850. Staff recommends that the Company be  
18 allowed to defer its BMP costs for consideration of recovery in a future rate case.

19 **Q. DOES THE COMPANY ACCEPT STAFF'S ADJUSTMENT?**

20 A. Yes, it does.

21 *Staff Income Statement Adjustment No. 6 – Rate Case Expense*

22 **Q. WHAT LEVEL OF RATE CASE EXPENSE DOES STAFF RECOMMEND?**

23 A. According to page 27 (lines 16 – 22) of Mr. Michlik's testimony, Staff  
24 recommends total rate case expense of \$246,070, recovered over three years.

25 **Q. DOES THE COMPANY ACCEPT STAFF'S RECOMMENDED RATE CASE  
26 EXPENSE?**

27 A. No. The Company does not accept Staff's recommended rate case expense in  
28 this proceeding. Staff's recommendation is, on its face, unreasonable simply

1 because it is lower than the \$250,000 in rate case expense approved for the  
2 Company's Eastern Group in Decision No. 66849, which used a 2001 test year,  
3 as well as its Western Group in Decision No. 68302, which used a 2003 test  
4 year. Further, Staff's recommendation is only \$29,000 higher than the amount of  
5 rate case expense approved for the Company's Northern Group (\$217,000) in  
6 Decision No. 64282, dated December 28, 2001, in which the test year used was  
7 11 years earlier than the test year in this case, and concerned total revenues and  
8 rate base that were less than one-third of those in the instant case.

9 Putting Commission decisions aside, Staff's recommendation is not even  
10 consistent with its own recommendations in prior cases, particularly the  
11 Company's last Eastern Group rate case. In that proceeding, Staff  
12 recommended total rate case expense of \$257,550, over \$11,000 more than  
13 what Mr. Michlik recommends in this case.

14 In the Company's last Western Group rate case, Staff recommended total  
15 rate case expense of \$225,000, citing the fact that the Western Group was  
16 "smaller than the Eastern Group" had been at the time of its 2001 test year rate  
17 case.<sup>2</sup> In terms of net plant, the Western Group was \$17 million smaller than  
18 the Eastern Group was at the time of its 2001 test year rate case. Now, the  
19 Eastern Group is over \$43 million larger than it was in its 2001 test year rate  
20 proceeding, yet Staff recommends lower rate case expense. Contrary to what  
21 Staff believes, costs have increased, not decreased, over the past decade.

22 **Q. DOES STAFF EXPLAIN HOW IT ARRIVED AT ITS RECOMMENDED LEVEL**  
23 **OF RATE CASE EXPENSE IN THIS CASE?**

24 **A.** Yes. According to page 27 (lines 13 – 22) of Mr. Michlik's direct testimony, Staff  
25 seeks to allocate the amount of rate case expense incurred up to four years ago  
26 by the Company in its last total company rate case, \$616,199, to each of the  
27

28 <sup>2</sup> Decision No. 68302, page 27, lines 17-18.

1 Company's water systems to arrive at a level of rate case expense applicable to  
2 the Eastern Group in this proceeding.

3 **Q. IS STAFF'S METHOD REASONABLE?**

4 A. No. Staff's method of relying on the Company's most recent total company rate  
5 case is an apples-to-oranges comparison in that it fails to recognize the fact that  
6 certain costs, such as those associated with the use of expert witnesses, do not  
7 decrease with the size of the rate filing. A more appropriate comparison would  
8 be the amount incurred in the Company's most recent Eastern Group rate case  
9 and, to a lesser extent, its most recent Western or Northern Group rate cases,  
10 with an appropriate adjustment for inflation.

11 **Q. HOW DOES THE COMPANY RESPOND TO MR. MICHLIK'S SUGGESTION**  
12 **ON PAGE 27 (LINES 2 – 5) OF HIS DIRECT TESTIMONY THAT THE**  
13 **COMPANY SHOULD ONLY BE ALLOWED TO RECOVER A PORTION OF ITS**  
14 **OVERALL RATE CASE EXPENSE BECAUSE IT COULD HAVE, AND**  
15 **SHOULD HAVE, FILED A TOTAL COMPANY RATE CASE?**

16 A. In 1992, the Commission expressly authorized the Company to file general rate  
17 cases for its individual groups as part of Decision No. 58120, dated December  
18 23, 1992. Page 33 (lines 19-26) of that decision states:

19  
20 "The filing of one rate application for all of the individual  
21 water utilities under Arizona Water's jurisdiction has proven  
22 to be unwieldy and inefficient. Processing 18 simultaneous  
23 rate cases is a burdensome, time consuming task for the  
24 parties and the Commission. In the interest of allowing a  
25 more thorough review to be undertaken while at the same  
26 time reducing regulatory lag, we will adopt the three-group  
27 concept. Arizona Water may file an individual rate  
28 application for each group as needed."

26 Nowhere in the above-referenced decision did the Commission state that  
27 any future rate case expense allowance should be anything less than the actual  
28 costs that are prudently incurred. Mr. Michlik appears to suggest that a



significant portion of the Company's rate case expense is not prudently incurred because, in his opinion, the Company should have filed a total company rate case. This suggestion conflicts with the Commission's finding in Decision No. 58120.

**Q. DID THE COMPANY FILE ANY INDIVIDUAL GROUP RATE CASE APPLICATIONS AFTER THE COMMISSION ISSUED DECISION NO. 58120?**

A. Yes. As stated above, the Company filed three individual group rate case applications for its Northern, Eastern, and Western Groups as follows:

Northern Group Rate Case – Docket No. W-01445A-00-0962 filed in 2000

Eastern Group Rate Case – Docket No. W-01445A-02-0619 filed in 2002

Western Group Rate Case – Docket No. W-01445A-04-0650 filed in 2004

**Q. DID STAFF RAISE ANY CONCERNS OR OBJECTIONS ABOUT THE COMPANY FILING THREE INDIVIDUAL GROUP RATE CASE APPLICATIONS IN LIEU OF A TOTAL COMPANY RATE APPLICATION IN ANY OF THOSE PROCEEDINGS?**

A. No. Nor did Staff recommend in any of the above individual group rate cases that the Company only be allowed to recover a portion of its rate case expense because, in Staff's opinion, the Company should have filed a total company rate case.

**Q. HAVE RECENT COMPANY RATE PROCEEDINGS SHOWN HOW COMPLEX, UNWIELDLY, AND INEFFICIENT A COMPANY-WIDE RATE APPLICATION CAN BE?**

A. Yes. The Company's most recent total company rate case (Docket No. W-01445A-08-0440) was filed on August 22, 2008, and was decided by the Commission on August 25, 2010, taking over 24 months to complete, longer than any other general rate case application during this same time period. The

Company believes this longer time frame was largely due to the complexity and inefficiency of a Company-wide rate application.

**Q. HOW DOES THAT TIMEFRAME COMPARE WITH THE COMPANY'S PREVIOUS INDIVIDUAL GROUP RATE APPLICATIONS?**

A. The Company's most recent total company rate case took nearly twice as long to complete as any of its most recent individual group rate applications. The Commission's observations about the efficiencies of filing an application for an individual group and the complexities, regulatory lag, and unwieldy nature of processing a companywide general rate case are clearly borne out by the overall timeline of processing the most recent four general rate cases in the table below:

Subject of Rate Case	Docket Number and Date Filed	Time to Complete Rate Case
Northern Group	W-01445A-00-0962 – November 22, 2000	401 Days
Eastern Group	W-01445A-02-0619 – August 14, 2002	443 Days
Western Group	W-01445A-04-0650 – September 8, 2004	410 Days
Total-Company	W-01445A-08-0440 – August 22, 2008	733 Days

**Q. HOW DO THE INEFFICIENCIES ILLUSTRATED IN THE TABLE ABOVE TRANSLATE INTO UNRECOVERED COSTS?**

A. As stated above, the Company filed its most recent total company rate case on August 24, 2008. The Company's application was found sufficient on October 15, 2008, and the rates approved in that proceeding (Decision No. 71845) went into effect on July 1, 2010. From the time new rates were expected to have gone into effect, based on Title 14 (Chapter 2, Section 103) of the Arizona Administrative Code, until the time new rates actually went into effect, the Company's shareholders funded over \$2.7 million of the overall cost of providing

1 service.<sup>3</sup> Also as a result of the length of time it took to process the Company's  
2 most recent total company rate case, a portion of the cost of preparing, filing and  
3 processing that case will not be recovered by the time the rates established in  
4 this proceeding go into effect. For this reason, the Company included this  
5 unrecovered portion, \$17,247, in its estimate of total rate case expense in this  
6 proceeding. Staff's proposed rate case expense does not account for these  
7 costs.

8 Based on the foregoing discussion and evidence, the Company should not  
9 be criticized for filing an individual group rate application when experience shows  
10 that filing a total company application significantly increases regulatory lag,  
11 further preventing the Company from recovering its cost of providing service.

12 **Q. DID THE COMPANY PROVIDE STAFF OR RUCO WITH ANY**  
13 **DOCUMENTATION SUPPORTING THE COMPANY'S ESTIMATE OF RATE**  
14 **CASE EXPENSE IN THIS PROCEEDING?**

15 **A.** Yes. The Company provided a detailed breakdown of its estimated rate case  
16 expense, as well as a summary of actual charges to date, in its response to  
17 RUCO Data Request 1.27, which is attached hereto as Exhibit JMR-RB5. The  
18 Company also provided Staff with a copy of the same responses, including all of  
19 the associated documentation.

20 **Q. DID STAFF OR RUCO CHALLENGE THE REASONABLENESS OF THE**  
21 **COMPANY'S ESTIMATE OR ITS ACTUAL COSTS INCURRED TO DATE?**

22 **A.** No. They do not challenge the Company's original estimate or its actual costs.  
23 RUCO and Staff simply offer their own theoretical "back of the envelope"  
24 calculations. That approach is not based on any evidence of the Company's cost  
25 to present this rate case.

26  
27  
28 <sup>3</sup> Overall revenue increase approved in Dec. 71845: \$9,153,659, less \$5,411,702 in surcharges in effect at the time:  
\$3,741,957, or approximately \$10,250/day, times 264 days (624 days from date of sufficiency until date new rates  
went into effect, less 360-day time-clock)

1 Q. HOW DOES THE COMPANY RESPOND TO MR. MICHLIK'S STATEMENT ON  
2 PAGES 27 (LINES 25 – 26) AND 28 (LINES 1 – 3) OF HIS DIRECT  
3 TESTIMONY, THAT HE FINDS IT "PERPLEXING" THAT THE COMPANY  
4 WOULD INCUR COSTS ASSOCIATED WITH OUTSIDE LEGAL COUNSEL  
5 AND WITNESSES?

6 A. Mr. Michlik attempts to support Staff's position that the Company's proposed  
7 level of rate case expense is unreasonable because it employs in-house legal  
8 counsel and personnel qualified to address the cost of equity capital and,  
9 therefore, the costs associated with these aspects of the rate case are avoidable.  
10 As with Staff's recommended level of rate case expense itself, the Commission  
11 should disregard Mr. Michlik's testimony on the basis of its inconsistency. Staff  
12 has not shown how the Company's use of outside experts and legal counsel is  
13 less prudent than any other utility's use of such services. Nor has Staff testified  
14 in other proceedings that it is "perplexed" or otherwise bewildered by the fact that  
15 Arizona Public Service Co., UNS Gas, Southwest Gas, or Arizona-American  
16 Water Co. (now EPCOR Water) employs outside legal counsel or expert  
17 witnesses when filing a rate case. In fact, Staff has accepted EPCOR Water's  
18 proposed rate case expense of \$529,210 in its currently-pending rate case  
19 (Docket No. W-01445A-10-0448) without questioning that company's decision to  
20 not file a total-company rate case or to employ outside legal or consulting  
21 services. Additionally, Staff has recommended \$400,000 in rate case expense,  
22 or 163% of what it recommends in this proceeding, in Pima Utility Company's  
23 currently-pending rate case (Docket No. W-02199A-11-0329 et al) despite the  
24 fact that Pima has one-third the number of systems, less than one-fifth the  
25 amount of net plant, and less than one-third the number of customers as the  
26 Company's Eastern Group. Clearly, Staff's arguments lack consistency and  
27 conflict with longstanding Commission policy and practice as well as Staff's own  
28 practice in other rate cases.

*Staff Income Statement Adjustment No. 7 – Depreciation Expense*

**Q. WHAT IS STAFF INCOME STATEMENT ADJUSTMENT NO. 7?**

A. Staff Income Statement Adjustment No. 7 adjusts Depreciation expense to reflect Staff's recommended plant balances. Staff's adjustment also reduces Depreciation expense in the Superstition system by \$45,326 to reflect Staff's proposed extension of the amortization period related to the \$691,522 in deferred Central Arizona Project ("CAP") charges currently included in the Superstition system's rate base.

**Q. PLEASE EXPLAIN THE SECOND PART OF STAFF'S ADJUSTMENT IN MORE DETAIL.**

A. Included in the Company's original application, and detailed on page 31 of the Appendix to Schedule C-2 of the application, was Company Income Statement Adjustment IS-18, related to Depreciation & Amortization expense. As I explained on page 19 (lines 10 – 21) of my direct testimony, Income Statement Adjustment IS-18 is the adjustment necessary to correct the amortization of deferred CAP charges approved in Decision No. 66849, dated March 19, 2004, for the Superstition system. In Decision No. 66849, the Commission included in the Superstition system's rate base \$691,522 in deferred CAP charges, to be amortized over a 10-year period<sup>4</sup>, resulting in an annual amortization amount of \$69,152 ( $\$691,522 \div 10$ ). However, the actual revenue requirement and resulting rates adopted in Decision No. 66849 reflected a 32.17-year amortization period, or \$21,498 per year. This has been the amount charged by the Company to amortization expense in each of the years since Decision No. 66849.<sup>5</sup> In its application, the Company proposed Income Statement Adjustment IS-18 as a means to correct this error. Income Statement Adjustment IS-18 increases Depreciation & Amortization expense by \$114,478, thus affording the Company

<sup>4</sup> Decision No. 66849, p. 10 at 1-2 and 14-15.

<sup>5</sup> As a result, the erroneous \$21,498 was again reflected in the rates adopted by Decision No. 71845, dated August 24, 2010.

1 an opportunity to fully recover its deferred CAP charges in the Superstition  
2 system over a time period based on the original 10 years contemplated by the  
3 Commission in Decision No. 66849. Staff Income Statement Adjustment No. 7  
4 extends this amortization period by approximately 3 years, resulting in an annual  
5 amortization amount that is equal to the original \$69,152.

6 **Q. DOES THE COMPANY ACCEPT STAFF'S ADJUSTMENT?**

7 A. No. Under the Company's proposal, the amortization period is already extended  
8 from 10 to 11.75 years, assuming there are no delays in this proceeding. There  
9 is no valid reason to further extend the amortization period already deemed  
10 reasonable by the Commission in Decision No. 66849.

11 **Q. WHAT BASIS DOES STAFF PROVIDE FOR FURTHER EXTENDING THE**  
12 **AMORTIZATION PERIOD, THEREBY REDUCING THE ANNUAL**  
13 **AMORTIZATION AMOUNT?**

14 A. According to page 29 (lines 12 – 22) of his direct testimony, Mr. Michlik argues  
15 that Staff's adjustment is necessary so as not to "burden ratepayers with the  
16 Company-proposed higher annual amortization amount," arguing further that the  
17 Company had two opportunities to identify the mismatch, once in Decision No.  
18 66849, and again in the rate case that concluded with Decision No. 71845.

19 **Q. DOES THE COMPANY'S PROPOSED PRO FORMA ADJUSTMENT**  
20 **"BURDEN" RATEPAYERS, AS STAFF CLAIMS?**

21 A. No. In fact, for over seven years, customers in the Superstition system have  
22 actually benefited by having paid rates for water utility service that are, by the  
23 Commission's own determination, too low. Staff's conclusion that the Company's  
24 adjustment burdens customers and their resulting proposal to alter the  
25 amortization period the Commission found reasonable in Decision No. 66849  
26 fails to take this fact into consideration.

Staff Income Statement Adjustment No. 8 – Income Tax Expense

Q. DOES THE COMPANY ACCEPT STAFF'S METHODOLOGY FOR CALCULATING TEST YEAR ADJUSTED INCOME TAXES AND THE REVENUE CONVERSION FACTOR USED TO CALCULATE THE REQUIRED REVENUE INCREASE?

A. Yes. The Company and Staff are in agreement on the methodology used to calculate income taxes.

Staff Income Statement Adjustment No. 9 – Property Tax Expense

Q. DOES THE COMPANY ACCEPT STAFF'S CALCULATION OF PROPERTY TAXES?

A. No. While Staff agrees with the Company's methodology, Staff's calculation disregards the fact that property tax rates have increased since the Test Year. These increases were reflected in the 2011 property tax bills provided to the parties in the Company's response to RUCO Data Request 1.29 on October 27, 2011 (See Exhibit JMR-RB6). This information reflected the following increases in property tax rates:

	Effective Property Tax Rate – As Filed	Current Effective Property Tax Rate
Superstition	11.82%	13.40%
Cochise	9.94%	10.17%
San Manuel	12.12%	12.37%
Oracle	9.57%	10.30%
SaddleBrooke	10.73%	10.30%
Winkelman	18.90%	20.78%

These known and measurable rate increases should be reflected in the calculation of adjusted Test Year property taxes and property taxes at proposed rates.

**Response to the Direct Testimony of RUCO Witness Mease**

*RUCO Income Statement Adjustment No. 1 – Pumping and T&D Maintenance Expenses*

**Q. ARE THE COMPANY AND RUCO IN AGREEMENT THAT THE TEST YEAR LEVELS OF PUMPING AND T&D MAINTENANCE EXPENSES WERE ABNORMAL AND WARRANT A NORMALIZING ADJUSTMENT?**

A. Yes. The Company and RUCO are in agreement that the Test Year levels of Pumping and T&D maintenance expenses were abnormally low and both parties propose normalizing adjustments.

**Q. HOW DOES RUCO PROPOSE TO NORMALIZE THESE EXPENSES?**

A. According to page 21 (lines 13 – 19) of Mr. Mease's direct testimony, RUCO normalized Pumping and T&D maintenance expenses by taking an average of the three years ending with the Test Year. The result is RUCO Income Statement Adjustment No. 1, a \$205,231 increase over the Test Year level of expenses, and \$342,987 below the level proposed by the Company.

**Q. DOES THE COMPANY ACCEPT RUCO'S ADJUSTMENT?**

A. No. While the Company and RUCO are in agreement that the Test Year levels of Pumping and T&D maintenance expenses were abnormally low and warrant normalization, RUCO's adjustment fails to recognize and account for the fact that water utilities operate in a rising-cost industry. As I explained above in response to Staff Income Statement Adjustment No. 3, infrastructure-related costs, including the cost of maintenance, exhibit a long-term increasing trend. The appropriate method of normalizing an expense that exhibits such a trend is to perform some type of time-series analysis that captures its impact. Levine, Krehbiel and Berenson, authors of the introductory text, *Business Statistics*, explain further:

The first step in a time-series analysis is to plot the data and observe any patterns that may occur over time. You must first determine whether there appears to be a long-term



1 upward or downward movement in the series (i.e., a trend)  
2 or whether the series seems to vary about a horizontal line  
3 over time. If there is no long-term upward or downward  
4 trend, then the method of moving averages or the method of  
5 exponential smoothing can be used to smooth the series and  
6 provide an overall long-term impression (See Section 12.3).  
7 On the other hand, if a trend is actually present, a variety of  
8 time-series forecasting methods can be considered (See  
9 Sections 12.4 and 12.5) when dealing with annual data.<sup>6</sup>

10 One of the time-series methods described by Levine, Krehbiel and  
11 Berenson is the simple linear regression analysis performed by the Company.

12 **Q. HOW DO YOU RESPOND TO MR. MEASE'S STATEMENT ON PAGE 20**  
13 **(LINES 12 – 16) OF HIS DIRECT TESTIMONY THAT THE ELEVEN-YEAR**  
14 **ANALYSIS PERFORMED BY THE COMPANY DOES NOT PRODUCE**  
15 **RESULTS THAT SUPPORT A STRONG RELATIONSHIP BETWEEN THE**  
16 **VARIABLES USED IN THE ANALYSIS?**

17 **A.** As I explained above, the Company performed a conservative analysis by  
18 examining all years from 2000 through 2010. That analysis included the  
19 abnormally low years of 2008 through 2010, which reduce the impact of the trend  
20 and lower the statistical significance of the analysis. If one were to exclude those  
21 abnormal years from the analysis of T&D maintenance expense, the statistical  
22 significance (i.e. the strength of the relationship between the variables) and,  
23 consequently, the normalized level of T&D maintenance expense, would  
24 increase. This conclusion is consistent with the chart of T&D maintenance costs  
25 per customer from 1991 through 2007 that I provided above in my response to  
26 Staff witness Mr. Michlik (Staff Income Statement Adjustment No. 3 – Pumping  
27 and T&D Maintenance Expense), illustrating the long-term increasing trend  
28 present in these costs.

<sup>6</sup> Levine, David M., Timothy C. Krehbiel and Mark L. Berenson. *Business Statistics*. 3<sup>rd</sup> ed. 2003. p. 569.

*RUCO Income Statement Adjustment No. 2 – Rate Case Expense*

**Q. WHAT LEVEL OF RATE CASE EXPENSE DOES RUCO RECOMMEND?**

A. According to page 22 (lines 4 – 8) of Mr. Mease's direct testimony, RUCO recommends \$312,600 in rate case expense, recovered over three years.

**Q. HOW DID RUCO ARRIVE AT ITS RECOMMENDED LEVEL OF RATE CASE EXPENSE IN THIS PROCEEDING?**

A. According to page 22 (lines 12 – 18) of Mr. Mease's direct testimony, RUCO applied an inflation factor for the years 2004 through 2011 to the amount of rate case expense approved by the Commission in the Company's last Eastern Group rate case, which was \$250,000.

**Q. DOES THE COMPANY ACCEPT RUCO'S RECOMMENDED LEVEL OF RATE CASE EXPENSE?**

A. No. If RUCO believes it is appropriate to rely on the Company's last Eastern Group rate case (Docket No. W-01445A-02-0619) as the basis for what it believes is a fair and reasonable level of rate case expense in this proceeding, as stated by Mr. Mease on page 22 (lines 10 – 18) of his direct testimony, then a more appropriate figure to apply in calculating its estimate would be the \$345,727 actually incurred in that case. Had Mr. Mease applied this figure, his recommended level of rate case expense would be \$432,297. This, while still below the Company's proposed level of rate case expense of \$476,874, is a figure that is more reasonable.

*RUCO Income Statement Adjustment No. 3 – Fleet Fuel Expense*

**Q. DOES THE COMPANY ACCEPT RUCO INCOME STATEMENT ADJUSTMENT NO. 3 RELATED TO FLEET FUEL?**

A. No. RUCO Income Statement Adjustment No. 3 suffers from the same flaws discussed above with respect to Staff's fleet fuel adjustment and, for the same reasons, the Company cannot accept it.

*RUCO Income Statement Adjustment No. 4 – Miscellaneous Expense*

**Q. DOES THE COMPANY ACCEPT RUCO INCOME STATEMENT ADJUSTMENT NO. 4 TO REDUCE OPERATING EXPENSES IN THE EASTERN GROUP BY A TOTAL OF \$10,402 REPRESENTING MISCELLANEOUS ITEMS?**

**A.** Yes. RUCO's adjustment removes costs related to such items as flowers, gifts and donations, and results in a 50/50 sharing of association dues. The Company reviewed the charges RUCO proposes to remove and will accept RUCO's proposed adjustment.

*RUCO Income Statement Adjustment No. 5 – Depreciation Expense*

**Q. ARE THE COMPANY AND RUCO IN AGREEMENT REGARDING THE CALCULATION OF DEPRECIATION EXPENSE?**

**A.** Yes. The Company and RUCO are in agreement on the methodology used to calculate Depreciation expense.

*RUCO Income Statement Adjustment No. 6 – Property Taxes*

**Q. DOES THE COMPANY ACCEPT RUCO'S CALCULATION OF PROPERTY TAXES?**

**A.** No. As with Staff's calculation of property taxes, RUCO's calculation relies on the effective property tax rates prevailing at the end of the Test Year. While the Company and RUCO agree on methodology, property tax rates have increased since the Test Year, as reflected in the following table (also shown above):

	<b>Effective Property Tax Rate – As Filed</b>	<b>Current Effective Property Tax Rate</b>
Superstition	11.82%	13.40%
Cochise	9.94%	10.17%
San Manuel	12.12%	12.37%
Oracle	9.57%	10.30%
SaddleBrooke	10.73%	10.30%
Winkelman	18.90%	20.78%

1 As mentioned above, these increases were reflected in the 2011 property  
2 tax bills provided to the parties in the Company's response to RUCO Data  
3 Request 1.29 on October 27, 2011 (See Exhibit JMR-RB6). These known and  
4 measurable rate increases should be reflected in the calculation of Adjusted Test  
5 Year property taxes and property taxes at proposed rates.

6 **Additional Operating Expense Pro Forma Adjustments**

7 *Company Rebuttal Income Statement Adjustment IS-5 – Purchased Water*  
8 *Expense (San Manuel)*

9 **Q. IS THE COMPANY PROPOSING ANY ADDITIONAL PRO FORMA**  
10 **ADJUSTMENTS TO OPERATING EXPENSES AT THIS TIME?**

11 **A.** Yes. Company Rebuttal Income Statement Adjustment IS-5, shown on page 5 of  
12 the Appendix to Schedule C-2 Rebuttal (See Exhibit JMR-RB1) is an adjustment  
13 to reflect the most recent information available regarding Purchased Water  
14 expense in the San Manuel system. On page 17 (lines 6 – 12) of my direct  
15 testimony, I presented Company Income Statement Adjustment IS-12 (detailed  
16 on page 25 of the Appendix to Schedule C-2 of the Company's application)  
17 related to Purchased Water & Power expense. That adjustment showed an  
18 increase in the cost of purchased water, the sole source of supply in the San  
19 Manuel system, from \$1.12 per 1,000 gallons to \$2.40 per 1,000 gallons  
20 beginning January 1, 2012. The Company was notified of this increase by BHP  
21 Billiton ("BHP"), the Company's sole source of purchased water provider in San  
22 Manuel, on May 11, 2011. Subsequent to this initial notification, the Company  
23 successfully negotiated with BHP to lower the new purchased water rate from  
24 \$2.40 per 1,000 gallons to \$1.87 per 1,000 gallons. This revised rate,  
25 memorialized in the letter attached hereto as Exhibit JMR-RB7, became effective  
26 on January 1, 2012.

27 **Q. WHAT EFFECT DOES THIS REVISED RATE HAVE ON PURCHASED WATER**  
28 **EXPENSE IN THE SAN MANUEL SYSTEM?**

1 A. As shown on page 5 of the Appendix to Schedule C-2 Rebuttal (Exhibit JMR-  
2 RB1), Company Rebuttal Income Statement Adjustment IS-5 reduces the  
3 Adjusted Test Year (i.e. "as filed") level of Purchased Water Expense in the San  
4 Manuel system by \$82,364.

5 **V. Rate Design**

6 **Updated Cost of Service Study ("COSS") and Proposed Rate Design**

7 **Q. HAS THE COMPANY UPDATED ITS COSS?**

8 A. Yes. The Company's updated COSS is shown on Schedules G-1 Rebuttal  
9 through G-7 Rebuttal (See Exhibit JMR-RB1). The updated COSS reflects the  
10 Company's updated Adjusted Test Year operating results and resulting revenue  
11 requirement.

12 **Q. HAVE YOU MADE ANY OTHER CHANGES TO THE COSS?**

13 A. Yes. Minor changes were made to the functional allocation of Administrative &  
14 General expenses, shown on Schedule G-7 Rebuttal, to reflect the actual 2010  
15 mix of costs that were charged to this category of expense. For practical  
16 purposes, this update has little-to-no effect on the results of the COSS.

17 **Q. HAVE THE OVERALL RESULTS OF THE COMPANY'S COSS CHANGED  
18 FROM THOSE REFLECTED IN THE COMPANY'S APPLICATION?**

19 A. No. As shown on line 25 of Schedule G-1 Rebuttal (See Exhibit JMR-RB1), the  
20 rate of return at present rates for each of the customer classes is comparable to  
21 that reported on Schedule G-1 of the Company's application. Additionally, as  
22 shown on line 36 of Schedule G-1 Rebuttal (See Exhibit JMR-RB1), the required  
23 increase in gross revenues for the industrial class remains negative, indicating  
24 that present rate revenues from this class are, on average, greater than the cost  
25 of service allocated to it.

26 **Q. IS THE COMPANY TAKING THE SAME APPROACH TO RATE DESIGN AS  
27 IT DID IN ITS ORIGINAL APPLICATION?**

1 A. Yes. The Company's proposed rates shown on Schedule H-3 Rebuttal  
2 incorporate the same principles discussed in Section VI of my direct testimony.

3 **Response to the Direct Testimony of Staff Witness Bentley Erdwurm**

4 *Full Rate Consolidation*

5 **Q. DOES THE COMPANY AGREE WITH STAFF'S RECOMMENDATION**  
6 **REGARDING RATE CONSOLIDATION?**

7 A. No. Company witness Mr. Harris addresses the issue of rate consolidation in his  
8 rebuttal testimony.

9 *Revenue Allocation among Classes*

10 **Q. ARE THE COMPANY AND STAFF IN GENERAL AGREEMENT ON THE**  
11 **ALLOCATION OF REVENUES AMONG CUSTOMER CLASSES?**

12 A. Yes. The Company and Staff have taken the same general approach to  
13 allocating the revenue requirement among customer classes.

14 *Allocation of Revenues between Fixed Charges & Commodity Rates*

15 **Q. WHAT PERCENTAGE OF THE EASTERN GROUP'S OVERALL REVENUE**  
16 **REQUIREMENT DID STAFF ALLOCATE TO THE FIXED BASIC SERVICE**  
17 **CHARGE VS. THE COMMODITY RATE?**

18 A. According to Mr. Erdwurm's work papers, Staff's proposed rate design allocates  
19 41.0% of revenues over all classes of service to the fixed basic service charge  
20 and 51.0% to the commodity rate.

21 **Q. DOES THE COMPANY HAVE ANY CONCERNS ABOUT THE PERCENTAGE**  
22 **OF REVENUES STAFF PROPOSES TO ALLOCATE TO THE COMMODITY**  
23 **RATE?**

24 A. Yes. The Company has concerns about shifting fixed costs to the commodity  
25 rate thereby increasing revenue volatility and uncertainty, especially at a time  
26 when the Company is faced with the urgent need to fund much-needed  
27 infrastructure replacement programs. The Company's proposed rate design  
28 allocates 49% of the overall revenue requirement to the fixed basic service

1 charge and better helps to mitigate the likelihood of revenue volatility and  
2 uncertainty associated with increasing block rates.

3 *Staff's Proposed Miscellaneous Service Charges*

4 **Q. DOES THE COMPANY ACCEPT STAFF'S PROPOSED MISCELLANEOUS**  
5 **SERVICE CHARGES, INCLUDING SERVICE LINE AND METER**  
6 **INSTALLATION FEES?**

7 **A.** Yes. According to page 3 (lines 22 – 26) of Mr. Erdwurm's direct testimony,  
8 Staff recommends that the miscellaneous service charges reflected in the  
9 Settlement Agreement filed by the parties on February 15, 2012, in the  
10 Company's currently-pending Western Group rate case (Docket No. W-01445A-  
11 10-0517) be approved for the Eastern Group in this proceeding. The Company  
12 agrees with and accepts Staff recommendation.

13 *Declining Usage Rate Design/Normalization of Billing Determinants*

14 **Q. WHAT IS STAFF'S RECOMMENDATION REGARDING THE COMPANY'S**  
15 **PROPOSAL TO USE ADJUSTED BILLING DETERMINANTS TO DESIGN**  
16 **RATES IN ORDER TO ACCOUNT FOR DECLINING USAGE?**

17 **A.** On page 5 (lines 1 – 7) of his direct testimony, Mr. Erdwurm testifies that the  
18 slope coefficients determined by the regression analysis I presented in Exhibit  
19 JMR-1 of my direct testimony "vary significantly when the analysis is conducted  
20 over varying time frames (e.g., ten vs. five years)," and concludes that the  
21 Company's adjustment cannot be considered known and measurable.

22 **Q. DO YOU AGREE WITH MR. ERDWURM'S CONCLUSION?**

23 **A.** No. Given the consistency of the findings in Exhibit JMR-1 of my direct testimony  
24 with those of other studies, as well as the conclusions drawn by experts who  
25 performed those studies, I remain convinced that the existing evidence  
26 demonstrates that not only is there a known and identifiable pattern of decline in  
27 water usage, but that pattern of decline will continue.

28 **Q. WHAT OTHER STUDIES ARE YOU REFERRING TO?**

1 A. Most notably, I am referring to a 2010 project sponsored by the Water Research  
2 Foundation and the U.S. Environmental Protection Agency ("WRF-EPA Study")  
3 for the purpose of investigating declining trends in household water usage,  
4 drawing conclusions on the magnitude and causes of declining usage, and  
5 providing a tool for projecting such usage.<sup>7</sup> Another study of customer usage  
6 found a decrease in residential usage between 2001 and 2010 across several  
7 states, with the reporting authors agreeing with the conclusions of the WRF-EPA  
8 Study.<sup>8</sup>

9 **Q. WHAT ARE THE FINDINGS OF THE WRF-EPA STUDY?**

10 A. The WRF-EPA Study found a decline in annual residential usage at the national  
11 level of 0.44% per year since 1975. The decline was also pervasive at the  
12 regional level. Additionally, and more importantly for purposes of this  
13 proceeding, the WRF-EPA Study examined various factors at the local level to  
14 assess the causes of the decline in residential usage, and concluded that  
15 decreasing household size and the widespread installation and use of water-  
16 conserving appliances were the primary factors. Citing new federal regulations  
17 governing water-conserving appliances and fixtures, the study concluded that  
18 residential water usage *will continue to decline* as newer homes make up a larger  
19 component of the housing stock and more efficient appliances and fixtures  
20 penetrate the market. According to the WRF-EPA study:

21  
22 Another factor that will continue to lower residential water  
23 usage is the recently approved higher water-efficiency  
24 standards for washing machines and dishwashers. Under  
25 the new legislation, new home dishwashers manufactured  
26 beginning in 2010 will be prohibited from using more than  
27 4.5 or 6.5 gallons of water per cycle, depending on machine  
size. Beginning in 2011 all new home clothes washers will

28 <sup>7</sup> "North America Residential Water Usage Trends Since 1992." Water Research Foundation. © 2010. pp. xxi, xxvii.

<sup>8</sup> "Declining Residential Water Use Presents Challenges, Opportunities." Opflow. May, 2011.



1 use at least 9.5 gallons per cycle per cubic foot that the  
2 clothes washer uses.<sup>9</sup>

3 The authors of the WRF-EPA study reached these conclusions in  
4 conjunction with a study of usage patterns over a period of approximately 30  
5 years, compared to Exhibit JMR-1 of my direct testimony which examined usage  
6 over a 10-year period.

7 Based on the results of the WRF-EPA study showing that clothes washers  
8 represent approximately 21% of household indoor water consumption,<sup>10</sup> and an  
9 analysis of the new federal guideline estimating a decrease in the average  
10 number of gallons per load of 35%,<sup>11</sup> one can expect a 7.35% decline in indoor  
11 water usage in many households.

12 **Q. SHOULD THE COMMISSION RELY ON THE FINDINGS OF DECLINING**  
13 **USAGE STUDIES AND THE CONCLUSIONS REPORTED IN THE WRF-EPA**  
14 **STUDY AS EVIDENCE OF A KNOWN AND MEASURABLE CHANGE?**

15 **A.** Yes. As I mentioned in Section IV above, the Commission should conclude that  
16 the known and measurable standard is met when, as in this case, the Company  
17 provides evidence of a known and documented pattern of a decline in customer  
18 usage which is reasonably anticipated to continue during the period new rates  
19 are in effect. Accordingly, the Company's proposed rate design continues to  
20 incorporate its proposed adjustment to billing determinants.

21 **Response to the Direct Testimony of RUCO Witness William A. Rigsby**

22 *Rate Consolidation*

23 **Q. DID RUCO ADOPT THE COMPANY'S PROPOSED RATE CONSOLIDATION?**

24 **A.** Yes. According to page 15 (lines 1 – 4) of Mr. Rigsby's direct testimony, RUCO  
25 supports the Company's proposed consolidation of the San Manuel, Oracle and  
26

27 <sup>9</sup> WRF-EPA. pp. xxvii – xxviii, 65 – 77.

28 <sup>10</sup> WRF-EPA. p. 47.

<sup>11</sup> "Declining Residential Water Use." Opflow. p. 19.

1 SaddleBrooke Ranch systems into a new rate system known as Falcon Valley.

2 Mr. Harris addresses rate consolidation in further detail in his rebuttal testimony.

3 *Declining Usage Rate Design/Normalization of Billing Determinants*

4 **Q. WHAT IS RUCO'S RECOMMENDATION REGARDING THE COMPANY'S**  
5 **PROPOSAL TO USE ADJUSTED BILLING DETERMINANTS TO DESIGN**  
6 **RATES IN ORDER TO ACCOUNT FOR DECLINING USAGE?**

7 A. Mr. Rigsby responds to the Company's proposal on page 19 (lines 12 - 18) of his  
8 direct testimony by stating that RUCO is not convinced that usage will continue to  
9 decline, nor are they convinced that any declines in usage will affect the  
10 Company's ability to earn its authorized rate of return.

11 **Q. HOW DO YOU RESPOND?**

12 A. Mr. Rigsby provides no evidence to support his position and disregards the  
13 credible and substantial evidence the Company provided. In my response to  
14 Staff witness Mr. Erdwurm above, I cited the results of two recent studies which  
15 support the finding that a known and documented pattern of declining usage  
16 exists, and that a decline in customer usage can reasonably be anticipated to  
17 continue during the period new rates are in effect. In other words, although  
18 customer usage may eventually flatten out, it is not expected to do so any time  
19 soon, as RUCO assumes.

20 **Response to the Direct Testimony of RUCO Witness Robert B. Mease**

21 *Rate Design*

22 **Q. ARE THE COMPANY AND RUCO IN AGREEMENT ON THE GENERAL**  
23 **APPROACH TO RATE DESIGN?**

24 A. Yes. RUCO has incorporated each of the Company's rate design principles  
25 discussed in Section VI of my direct testimony.

26 **Q. DOES THAT CONCLUDE YOUR REBUTTAL TESTIMONY?**

27 A. Yes.

**JMR-RB1**

**ARIZONA WATER COMPANY**

Test Year Ended December 31, 2010  
Computation of Increase in Gross Revenue Requirement

Exhibit  
Schedule A-1 Rebuttal  
Page 1 of 7  
Witness: Reiker

Line No.	Description	Eastern Group							
		[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]
		Company - As Filed				Company - Rebuttal			
1									
2									
3									
4	Adjusted Rate Base	\$ 63,794,726				\$ 63,560,931			
5									
6	Adjusted Operating Income	\$ 3,016,638				\$ 3,053,036			
7									
8	Current Rate of Return (Ln. 6 ÷ Ln. 4)	4.73%				4.80%			
9									
10	Required Operating Income	\$ 6,199,317				\$ 6,187,871 <sup>2</sup>			
11									
12	Required Rate of Return	9.72%				9.72%			
13									
14	Operating Income Deficiency (Ln. 10 - Ln. 6)	\$ 3,182,678				\$ 3,134,835			
15									
16	Gross Revenue Conversion Factor	1.6554				1.6584			
17									
18	Required Increase in Gross Revenue (Ln. 14 X Ln. 16)	\$ 5,268,560				\$ 5,198,671			
19									
20	Add: Consolidated Revenue Adjustment <sup>1</sup>	\$ -				\$ -			
21									
22									
23	Proposed Increase in Gross Revenues	\$ 5,268,560				\$ 5,198,671			
24									
25									
26									
27									
28									
29	Customer Classification								
30									
31	Residential	\$ 15,371,629	\$ 19,493,333	\$ 4,121,704	26.81%	\$ 15,371,629	\$ 19,372,255	\$ 4,000,626	26.03%
32	Commercial	3,890,028	4,774,967	884,939	22.75%	3,890,028	4,822,349	932,321	23.97%
33	Industrial	76,580	86,667	10,087	13.17%	76,580	86,252	9,673	12.63%
34	Private Fire Service	68,497	75,628	7,131	10.41%	68,497	75,628	7,131	10.41%
35	Other Water Revenues	310,817	378,984	68,167	21.93%	310,817	383,206	72,389	23.29%
36									
37	Total Water Revenues	\$ 19,717,550	\$ 24,809,579	\$ 5,092,029	25.82%	\$ 19,717,550	\$ 24,739,691	\$ 5,022,141	25.47%
38									
39	Miscellaneous Revenues	799,406	975,534	176,128	22.03%	799,406	975,534	176,128	22.03%
40									
41	Total Operating Revenues	\$ 20,516,956	\$ 25,785,113	\$ 5,268,157	25.68%	\$ 20,516,956	\$ 25,715,225	\$ 5,198,269	25.34%

<sup>1</sup>Consolidated Revenue Adjustment represents the increase/(decrease) in revenue requirement resulting from proposed rate consolidation.

<sup>2</sup>Adopts Staff's recommendation to set required operating income for SaddleBrooke Ranch equal to \$0 as a result of negative rate base.

**ARIZONA WATER COMPANY**

Test Year Ended December 31, 2010  
Computation of Increase in Gross Revenue Requirement

Line No.	Description	Superstition (Apache Junction, Superior, Miami)							
		[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]
1									
2									
3									
4	Adjusted Rate Base	\$ 50,574,693				\$ 50,432,117			
5									
6	Adjusted Operating Income	\$ 2,562,892				\$ 2,534,589			
7									
8	Current Rate of Return (Ln. 6 ÷ Ln. 4)	5.07%				5.03%			
9									
10	Required Operating Income	\$ 4,914,647				\$ 4,900,792			
11									
12	Required Rate of Return	9.72%				9.72%			
13									
14	Operating Income Deficiency (Ln. 10 - Ln. 6)	\$ 2,351,755				\$ 2,366,203			
15									
16	Gross Revenue Conversion Factor	1.6560				1.6598			
17									
18	Required Increase in Gross Revenue (Ln. 14 X Ln. 16)	\$ 3,894,582				\$ 3,927,383			
19									
20									
21	Add: Consolidated Revenue Adjustment <sup>1</sup>	\$ -				\$ -			
22									
23	Proposed Increase in Gross Revenues	\$ 3,894,582				\$ 3,927,383			
24									
25									
26									
27									
28									
29	Customer Classification								
30									
31	Residential	\$ 11,436,957	\$ 14,555,439	\$ 3,118,483		\$ 11,436,957	\$ 14,580,858	\$ 3,143,902	27.49%
32	Commercial	2,606,590	3,190,590	584,000		2,606,590	3,197,568	590,978	22.67%
33	Industrial	70,149	78,895	8,746		70,149	78,895	8,746	12.47%
34	Private Fire Service	51,194	54,628	3,434		51,194	54,628	3,434	6.71%
35	Other Water Revenues	166,217	213,645	47,428		166,217	214,050	47,833	28.78%
36									
37	Total Water Revenues	\$ 14,331,107	\$ 18,093,197	\$ 3,762,091		\$ 14,331,107	\$ 18,125,999	\$ 3,794,893	26.48%
38									
39	Miscellaneous Revenues	725,456	857,550	132,094		725,456	857,550	132,094	18.21%
40									
41	Total Operating Revenues	\$ 15,056,563	\$ 18,950,747	\$ 3,894,185		\$ 15,056,563	\$ 18,983,550	\$ 3,926,987	26.08%

<sup>1</sup>Consolidated Revenue Adjustment represents the increase/(decrease) in revenue requirement resulting from proposed rate consolidation.

Supporting Schedules:  
B-1 Rebuttal, C-1 Rebuttal, H-1 Rebuttal

**ARIZONA WATER COMPANY**

Test Year Ended December 31, 2010  
Computation of Increase in Gross Revenue Requirement

Exhibit  
Schedule A-1 Rebuttal  
Page 3 of 7  
Witness: Reiker

Line No.	Description	Cochise (Bisbee, Sierra Vista)							
		[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]
		Company - As Filed				Company - Rebuttal			
1									
2									
3									
4	Adjusted Rate Base	\$ 8,550,839				\$ 8,425,690			
5									
6	Adjusted Operating Income	\$ 387,079				\$ 392,054			
7									
8	Current Rate of Return (Ln. 6 ÷ Ln. 4)	4.53%				4.65%			
9									
10	Required Operating Income	\$ 830,936				\$ 818,775			
11									
12	Required Rate of Return	9.72%				9.72%			
13									
14	Operating Income Deficiency (Ln. 10 - Ln. 6)	\$ 443,857				\$ 426,721			
15									
16	Gross Revenue Conversion Factor	1.6516				1.6521			
17									
18	Required Increase in Gross Revenue (Ln. 14 X Ln. 16)	\$ 733,087				\$ 705,007			
19									
20									
21	Add: Consolidated Revenue Adjustment <sup>1</sup>	\$ -				\$ -			
22									
23	Proposed Increase in Gross Revenues	\$ 733,087				\$ 705,007			
24									
25									
26									
27									
28									
29	Customer Classification								
30									
31	Residential	\$ 2,270,377	\$ 2,810,078	\$ 539,700		\$ 2,270,377	\$ 2,792,873	\$ 522,495	23.01%
32	Commercial	863,168	1,019,133	155,965		863,168	1,009,785	146,616	16.99%
33	Industrial	3,342	3,875	533		3,342	3,875	533	15.96%
34	Private Fire Service	16,647	19,893	3,246		16,647	19,893	3,246	19.50%
35	Other Water Revenues	107,088	114,922	7,833		107,088	113,394	6,306	5.89%
36									
37	Total Water Revenues	\$ 3,260,624	\$ 3,967,901	\$ 707,278		\$ 3,260,624	\$ 3,939,820	\$ 679,197	20.83%
38									
39	Miscellaneous Revenues	42,877	68,735	25,858		42,877	68,735	25,858	60.31%
40									
41	Total Operating Revenues	\$ 3,303,500	\$ 4,036,636	\$ 733,136		\$ 3,303,500	\$ 4,008,555	\$ 705,055	21.34%

<sup>1</sup>Consolidated Revenue Adjustment represents the increase/(decrease) in revenue requirement resulting from proposed rate consolidation.

Supporting Schedules:

B-1 Rebuttal, C-1 Rebuttal, H-1 Rebuttal

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Recap Schedules:

## ARIZONA WATER COMPANY

Test Year Ended December 31, 2010

Computation of Increase in Gross Revenue Requirement

Exhibit  
Schedule A-1 Rebuttal  
Page 4 of 7  
Witness: Reiker

		San Manuel							
		[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]
Line No. Description		Company - As Filed				Company - Rebuttal			
1									
2									
3									
4	Adjusted Rate Base	\$ 2,016,750				\$ 2,014,751			
5									
6	Adjusted Operating Income	\$ (28,824)				\$ 29,230			
7									
8	Current Rate of Return (Ln. 6 + Ln. 4)	-1.43%				1.45%			
9									
10	Required Operating Income	\$ 195,980				\$ 195,785			
11									
12	Required Rate of Return	9.72%				9.72%			
13									
14	Operating Income Deficiency (Ln. 10 - Ln. 6)	\$ 224,804				\$ 166,555			
15									
16	Gross Revenue Conversion Factor	1.6567				1.6573			
17									
18	Required Increase in Gross Revenue (Ln. 14 X Ln. 16)	\$ 372,441				\$ 276,037			
19									
20									
21	Add: Consolidated Revenue Adjustment <sup>1</sup>	\$ 15,017	(San Manuel/Oracle/SaddleBrooke Ranch)			\$ 77,147	(San Manuel/Oracle/SaddleBrooke Ranch)		
22									
23	Proposed Increase in Gross Revenues	\$ 387,458				\$ 353,183			
24									
25									
26									
27									
28									
29	Revenue - Present Rates	\$ 763,888	Revenue - Proposed Rates	\$ 1,076,848	Percent Increase	\$ 763,888	Revenue - Proposed Rates	\$ 247,062	Percent Increase
30	Customer Classification								
31	Residential	159,464	221,979	\$ 312,961	40.97%	\$ 159,464	\$ 1,010,949	\$ 247,062	32.34%
32	Commercial	-	-	62,516	39.20%	-	251,386	91,922	57.64%
33	Industrial	287	324	-	0.00%	-	-	-	0.00%
34	Private Fire Service	8,639	11,225	37	12.92%	287	324	37	12.92%
35	Other Water Revenues			2,585	29.93%	8,639	13,442	4,803	55.60%
36									
37	Total Water Revenues	\$ 932,277	\$ 1,310,376	\$ 378,099	40.56%	\$ 932,277	\$ 1,276,102	\$ 343,824	36.88%
38									
39	Miscellaneous Revenues	15,328	24,610	9,282	60.56%	15,328	24,610	9,282	60.56%
40									
41	Total Operating Revenues	\$ 947,605	\$ 1,334,986	\$ 387,381	40.88%	\$ 947,605	\$ 1,300,712	\$ 353,106	37.26%

<sup>1</sup>Consolidated Revenue Adjustment represents the increase/(decrease) in revenue requirement resulting from proposed rate consolidation.

Supporting Schedules:

B-1 Rebuttal, C-1 Rebuttal, H-1 Rebuttal

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Processing Date: 3/30/2012 11:09 AM

Recap Schedules:

		Oracle							
Line No.	Description	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]
		Company - As Filed				Company - Rebuttal			
1									
2									
3									
4	Adjusted Rate Base	\$ 2,470,183				\$ 2,497,996			
5									
6	Adjusted Operating Income	\$ 163,349				\$ 163,579			
7									
8	Current Rate of Return (Ln. 6 ÷ Ln. 4)	6.61%				6.55%			
9									
10	Required Operating Income	\$ 240,043				\$ 242,745			
11									
12	Required Rate of Return	9.72%				9.72%			
13									
14	Operating Income Deficiency (Ln. 10 - Ln. 6)	\$ 76,693				\$ 79,166			
15									
16	Gross Revenue Conversion Factor	1.6508				1.6525			
17									
18	Required Increase in Gross Revenue	\$ 126,601				\$ 130,819			
19	(Ln. 14 X Ln. 16)								
20									
21	Add: Consolidated Revenue Adjustment <sup>1</sup>	\$ 21,855	(San Manuel/Oracle/ SaddleBrooke Ranch)			\$ (21,051)	(San Manuel/Oracle/ SaddleBrooke Ranch)		
22									
23	Proposed Increase in Gross Revenues	\$ 148,456				\$ 109,768			
24									
25									
26									
27									
28									
29	Customer Classification								
30									
31	Residential	\$ 801,039	\$ 915,489	\$ 114,450	14.29%	\$ 801,039	\$ 856,189	\$ 55,150	6.88%
32	Commercial	156,439	180,318	23,879	15.26%	156,439	197,509	41,070	26.25%
33	Industrial	-	-	-	0.00%	-	-	-	0.00%
34	Private Fire Service	283	324	41	14.36%	283	324	41	14.36%
35	Other Water Revenues	19,841	23,223	3,383	17.05%	19,841	26,644	6,803	34.29%
36									
37	Total Water Revenues	\$ 977,602	\$ 1,119,354	\$ 141,752	14.50%	\$ 977,602	\$ 1,080,666	\$ 103,064	10.54%
38									
39	Miscellaneous Revenues	12,494	19,212	6,718	53.77%	12,494	19,212	6,718	53.77%
40									
41	Total Operating Revenues	\$ 990,095	\$ 1,138,566	\$ 148,470	15.00%	\$ 990,095	\$ 1,099,877	\$ 109,782	11.09%

<sup>1</sup>Consolidated Revenue Adjustment represents the increase/(decrease) in revenue requirement resulting from proposed rate consolidation.



**ARIZONA WATER COMPANY**

Test Year Ended December 31, 2010

Computation of Increase in Gross Revenue Requirement

		SaddleBrooke Ranch							
		[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]
Line No.	Description	Company - As Filed				Company - Rebuttal			
1									
2									
3									
4	Adjusted Rate Base	\$	(124,601)			\$	(116,014)		
5									
6	Adjusted Operating Income	\$	(78,989)			\$	(77,200)		
7									
8	Current Rate of Return (Ln. 6 + Ln. 4)		n/a				n/a		
9									
10	Required Operating Income	\$	(12,108)			\$	- <sup>2</sup>		
11									
12	Required Rate of Return		9.72%				n/a <sup>2</sup>		
13									
14	Operating Income Deficiency (Ln. 10 - Ln. 6)	\$	66,880			\$	77,200		
15									
16	Gross Revenue Conversion Factor		1.6535				1.6525		
17									
18	Required Increase in Gross Revenue (Ln. 14 X Ln. 16)								
19									
20		\$	110,584			\$	127,571		
21									
22	Add: Consolidated Revenue Adjustment <sup>1</sup>	\$	(36,871)	(San Manuel/Oracle/ SaddleBrooke Ranch)		\$	(56,095)	(San Manuel/Oracle/ SaddleBrooke Ranch)	
23									
24	Proposed Increase in Gross Revenues	\$	73,713			\$	71,475		
25									
26									
27									
28									
29									
30	Customer Classification								
31	Residential	\$	45,127	\$	65,719	\$	20,591		
32	Commercial		61,277		105,785		44,508		
33	Industrial		-		-		-		
34	Private Fire Service		85		459		374		
35	Other Water Revenues		9,032		15,970		6,938		
36									
37	Total Water Revenues	\$	115,521	\$	187,932	\$	72,411		
38									
39	Miscellaneous Revenues		1,582		2,884		1,302		
40									
41	Total Operating Revenues	\$	117,103	\$	190,816	\$	73,713		
42									
43									
44									
45									
46									
47									
48									
49									
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<sup>1</sup>Consolidated Revenue Adjustment represents the increase/(decrease) in revenue requirement resulting from proposed rate consolidation.

Supporting Schedules:  
B-1 Rebuttal, C-1 Rebuttal, H-1 Rebuttal

<sup>2</sup>Adopts Staff's recommendation to set required operating income for SaddleBrooke Ranch equal to \$0 as a result of negative rate base.

**ARIZONA WATER COMPANY**

Test Year Ended December 31, 2010  
Computation of Increase in Gross Revenue Requirement

		Winkelman				
Line No.	Description	[A]	[B]	[C]	[D]	[H]
		Company - As Filed			Company - Rebuttal	
1						
2						
3						
4	Adjusted Rate Base	\$ 306,862			\$ 306,390	
5						
6	Adjusted Operating Income	\$ 11,131			\$ 10,784	
7						
8	Current Rate of Return (Ln. 6 + Ln. 4)	3.63%			3.52%	
9						
10	Required Operating Income	\$ 29,820			\$ 29,774	
11						
12	Required Rate of Return	9.72%			9.72%	
13						
14	Operating Income Deficiency (Ln. 10 - Ln. 6)	\$ 18,689			\$ 18,990	
15						
16	Gross Revenue Conversion Factor	1.6729			1.6774	
17						
18	Required Increase in Gross Revenue (Ln. 14 X Ln. 16)	\$ 31,264			\$ 31,855	
19						
20						
21	Add: Consolidated Revenue Adjustment <sup>1</sup>	\$ -			\$ -	
22						
23	Proposed Increase in Gross Revenues	\$ 31,264			\$ 31,855	
24						
25						
26						
27						
28						
29	Customer Classification					
30						
31	Residential	\$ 54,241	\$ 69,760	\$ 15,519	\$ 54,241	\$ 70,282
32	Commercial	43,091	57,162	14,071	43,091	57,845
33	Industrial	3,089	3,897	808	3,089	3,482
34	Private Fire Service	-	-	-	-	-
35	Other Water Revenues	-	-	-	-	-
36						
37	Total Water Revenues	\$ 100,421	\$ 130,819	\$ 30,398	\$ 100,421	\$ 131,410
38						
39	Miscellaneous Revenues	1,669	2,543	874	1,669	2,543
40						
41	Total Operating Revenues	\$ 102,090	\$ 133,362	\$ 31,272	\$ 102,090	\$ 133,953
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<sup>1</sup>Consolidated Revenue Adjustment represents the increase/(decrease) in revenue requirement resulting from proposed rate consolidation.

Supporting Schedules:  
B-1 Rebuttal, C-1 Rebuttal, H-1 Rebuttal

Line No.	Eastern Group		
	(A)	(B)	(C)
	O.C. Rate Base - Company - As Filed	Rebuttal Adjustments	O.C. Rate Base Company - Rebuttal
1			
2	Gross Plant in Service	\$ 151,472,461	\$ (173,918) \$ 151,298,543
3			
4	Less:		
5	Accumulated Depreciation	39,957,566	(8,987) 39,948,579
6	Net Plant in Service	\$ 111,514,896	\$ (164,931) \$ 111,349,964
7			
8	Less:		
9	Advances in Aid of Construction	17,126,507	- 17,126,507
10	Contributions in Aid of Construction:		
11	Gross	24,359,966	- 24,359,966
12	Accumulated Amortization	(3,198,974)	- (3,198,974)
13	Net Contributions in Aid of Construction	\$ 21,160,992	\$ - \$ 21,160,992
14			
15	Deferred Income Tax	10,111,714	- 10,111,714
16	Customer Deposits	386,987	- 386,987
17			
18	Add:		
19	Working Capital	1,514,030	(68,864) 1,445,166
20	Net Regulatory Asset / (Liability)	(448,000)	- (448,000)
21			
22	Total Rate Base	\$ 63,794,726	\$ (233,795) \$ 63,560,931
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Line No.	Superstition (Apache Junction, Superior, Miami)			
	[A]	[B]	[C]	
	O.C. Rate Base - Company - As Filed	Rebuttal Adjustments	O.C. Rate Base Company - Rebuttal	
1				
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		Cochise (Bisbee, Sierra Vista)	
		(A)	(B)
			(C)
Line No.		O.C. Rate Base - Company - As Filed	O.C. Rate Base Company - Rebuttal
1			
2	Gross Plant in Service	\$ 20,992,936	\$ (122,234)
3			
4	Less:		
5	Accumulated Depreciation	7,506,943	39
6	Net Plant in Service	\$ 13,485,994	\$ (122,273)
7			
8	Less:		
9	Advances in Aid of Construction	1,632,190	-
10	Contributions in Aid of Construction:		
11	Gross	2,198,794	-
12	Accumulated Amortization	(439,381)	-
13	Net Contributions in Aid of Construction	\$ 1,759,413	\$ -
14			
15	Deferred Income Tax	1,823,964	-
16	Customer Deposits	38,290	-
17			
18	Add:		
19	Working Capital	318,702	(2,875)
20	Net Regulatory Asset / (Liability)	-	-
21			
22			
23	Total Rate Base	\$ 8,550,839	\$ (125,148)
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Line No.	San Manuel			[C]
	[A]	[B]		
	O.C. Rate Base - Company - As Filed	Rebuttal Adjustments	O.C. Rate Base Company - Rebuttal	
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Line No.	Oracle		
	[A]	[B]	[C]
	O.C. Rate Base - Company - As Filed	Rebuttal Adjustments	O.C. Rate Base Company - Rebuttal
1			
2	Gross Plant in Service		
3	\$ 7,436,010	\$ 29,823	\$ 7,465,833
4			
5	Less:		
6	Accumulated Depreciation		
7	Net Plant in Service	11	2,829,394
8	\$ 4,606,627	\$ 29,812	\$ 4,636,439
9			
10	Less:		
11	Advances in Aid of Construction		
12	Contributions in Aid of Construction:		
13	Gross	-	814,160
14	Accumulated Amortization	-	1,006,130
15	Net Contributions in Aid of Construction	-	(140,146)
16	\$ 865,984	\$ -	\$ 865,984
17			
18	Deferred Income Tax		
19	Customer Deposits	-	517,509
20		-	12,126
21			
22	Add:		
23	Working Capital		
24	Net Regulatory Asset / (Liability)	(1,999)	71,337
25		-	-
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	Total Rate Base		
	\$ 2,470,183	\$ 27,813	\$ 2,497,996

Supporting Schedules:  
B-2 Rebuttal, B-5 Rebuttal

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Recap Schedules:  
A-1 Rebuttal



Line No.	Winkelman			
	[A]	[B]	[C]	
	O.C. Rate Base - Company - As Filed	Rebuttal Adjustments	O.C. Rate Base Company - Rebuttal	
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Gross Plant in Service	\$	591,416	\$	12	\$	591,428
Less:						
Accumulated Depreciation		220,207		1		220,208
Net Plant in Service	\$	371,209	\$	11	\$	371,219
Less:						
Advances in Aid of Construction		-		-		-
Contributions in Aid of Construction:						
Gross		21,225		-		21,225
Accumulated Amortization		(984)		-		(984)
Net Contributions in Aid of Construction	\$	20,241	\$	-	\$	20,241
Deferred Income Tax		48,199		-		48,199
Customer Deposits		1,249		-		1,249
Add:						
Working Capital		5,343		(483)		4,860
Net Regulatory Asset / (Liability)		-		-		-
Total Rate Base	\$	306,862	\$	(472)	\$	306,390

**ARIZONA WATER COMPANY**

Test Year Ended December 31, 2010  
Original Cost Rate Base Pro Forma Adjustments

Exhibit  
Schedule B-2 Rebuttal  
Page 1 of 9  
Witness: Reiker

**Eastern Group**

Line No.	Description	[A] Actual End of Test Year	[B] Total Pro Forma Adjustments	[C] Adjusted Test Year - As Filed	[D]		[E]		[F]		[G]		[H]		[I]		[J]		[K] Total Rebuttal Adjustments	[L] Adjusted Test Year - Rebuttal
					Rebuttal Adj. RB-1	Rebuttal Adj. RB-2	Rebuttal Adj. RB-3	Rebuttal Adj. RB-4	Rebuttal Adj. RB-5	Rebuttal Adj. RB-6	Rebuttal Adj. RB-7	Rebuttal Adj. RB-8	Rebuttal Adj. RB-9	Rebuttal Adj. RB-10	Rebuttal Adj. RB-11	Rebuttal Adj. RB-12	Rebuttal Adj. RB-13	Rebuttal Adj. RB-14		
1																				
2	Plant Classification																			
3	Intangible Plant	\$ 58,640	\$ 3,646	\$ 62,287	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 62,287
4	Source of Supply Plant	12,119,334	32	12,119,366	(7,699)	9,510	-	-	-	-	-	-	-	-	-	-	-	-	1,811	12,121,177
5	Pumping Plant	13,726,237	148,912	13,875,149	(1,655)	-	34,484	-	-	-	-	-	-	-	-	-	-	-	32,829	13,907,978
6	Water Treatment Plant	9,148,058	2,872,884	12,020,942	-	-	(82,867)	-	-	-	-	-	-	-	-	-	-	-	(82,867)	11,938,075
7	Transmission & Distribution Plant	103,673,748	1,271,897	104,945,645	-	-	(127,583)	-	-	-	-	-	-	-	-	-	-	-	(127,583)	104,818,062
8	General Plant	5,608,894	2,840,179	8,449,073	-	-	(565)	-	-	-	-	-	-	-	-	-	-	-	1,892	8,450,965
9	Total Gross Plant in Service	\$ 144,334,911	\$ 7,137,550	\$ 151,472,461	\$ (9,354)	\$ 9,510	\$ (176,531)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 2,457	\$ (173,918)	\$ 151,298,543
10																				
11	Less:																			
12	Accumulated Depreciation	39,243,873	713,692	39,957,566	(9,354)	149	-	-	-	-	-	-	-	-	-	-	-	218	(8,987)	39,948,579
13	Net Plant in Service	\$ 105,091,038	\$ 6,423,858	\$ 111,514,896	\$ -	\$ 9,361	\$ (176,531)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 2,239	\$ (164,931)	\$ 111,349,964
14																				
15	Less:																			
16	Advances in Aid of Construction	17,126,507	-	17,126,507	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	17,126,507
17	Contributions in Aid of Construction:																			
18	Gross	24,359,966	-	24,359,966	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	24,359,966
19	Accumulated Amortization	(3,198,974)	-	(3,198,974)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	(3,198,974)
20	Net Contributions in Aid of Construction	\$ 21,160,992	\$ -	\$ 21,160,992	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 21,160,992
21																				
22	Deferred Income Tax	-	10,111,714	10,111,714	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10,111,714
23	Customer Deposits	386,987	-	386,987	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	386,987
24																				
25	Add:																			
26	Working Capital	1,514,030	-	1,514,030	-	-	-	(68,864)	-	-	-	-	-	-	-	-	-	-	(68,864)	1,445,166
27	Net Regulatory Asset / (Liability)	-	(448,000)	(448,000)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	(448,000)
28																				
29	Total Rate Base	\$ 67,930,562	\$ (4,135,856)	\$ 63,794,726	\$ -	\$ 9,361	\$ (176,531)	\$ (68,864)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 2,239	\$ (233,795)	\$ 63,560,931
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Supporting Schedules:

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Recap Schedules:  
B-1 Rebuttal

**ARIZONA WATER COMPANY**  
Test Year Ended December 31, 2010  
Original Cost Rate Base Pro Forma Adjustments

Line No.	Plant Classification	[A] Actual End of Test Year	[B] Total Pro Forma Adjustments	[C] Adjusted Test Year - As Filed	Superstition (Apache Junction, Superior, Miami)					[J] Rebuttal Adj. RB-5	[K] Total Rebuttal Adjustments	[L] Adjusted Test Year - Rebuttal
					[D] Rebuttal Adj. RB-1	[E] Rebuttal Adj. RB-2	[F] Rebuttal Adj. RB-3	[G] Rebuttal Adj. RB-4	[H] Rebuttal BLANK			
1												
2	Plant Classification	\$ 12,375	\$ 2,621	\$ 14,996	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 14,996
3	Intangible Plant	9,147,638	23	9,147,660	(7,699)		34,484				(7,699)	9,139,961
4	Source of Supply Plant	9,986,535	148,912	10,135,447	(1,655)		(82,867)				32,829	10,168,276
5	Pumping Plant	7,448,002	2,872,654	10,320,656	-		(34,604)				(82,867)	10,237,789
6	Water Treatment Plant	78,380,068	367,111	78,747,178	-		(565)				(34,604)	78,712,575
7	Transmission & Distribution Plant	3,936,146	2,049,266	5,985,412	-		(83,551)			1,766	1,201	5,986,613
8	General Plant	\$ 108,910,763	\$ 5,440,587	\$ 114,351,350	\$ (9,354)	\$ -	\$ -	\$ -	\$ -	\$ 1,766	\$ (91,140)	\$ 114,260,210
9	Total Gross Plant in Service											
10												
11	Less:	27,323,731	520,764	27,844,496	(9,354)		(83,551)			157	(9,197)	27,835,298
12	Accumulated Depreciation	\$ 81,587,032	\$ 4,919,823	\$ 86,506,854	\$ -	\$ -	\$ (83,551)	\$ -	\$ -	\$ 1,609	\$ (81,942)	\$ 86,424,912
13	Net Plant in Service											
14												
15	Less:	11,305,977	-	11,305,977								11,305,977
16	Advances in Aid of Construction											
17	Contributions in Aid of Construction:											
18	Gross	20,165,452	-	20,165,452								20,165,452
19	Accumulated Amortization	(2,561,377)	-	(2,561,377)								(2,561,377)
20	Net Contributions in Aid of Construction	\$ 17,604,075	\$ -	\$ 17,604,075	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 17,604,075
21												
22	Deferred Income Tax	-	7,267,953	7,267,953								7,267,953
23	Customer Deposits	322,847	-	322,847								322,847
24												
25	Add:											
26	Working Capital	1,016,691	(448,000)	1,016,691				(60,634)			(60,634)	956,056
27	Net Regulatory Asset / (Liability)	-		(448,000)								(448,000)
28												
29	Total Rate Base	\$ 53,370,823	\$ (2,796,130)	\$ 50,574,693	\$ -	\$ -	\$ (83,551)	\$ (60,634)	\$ -	\$ 1,609	\$ (142,576)	\$ 50,432,117
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Supporting Schedules:

**ARIZONA WATER COMPANY**

Test Year Ended December 31, 2010  
Original Cost Rate Base Pro Forma Adjustments

Exhibit  
Schedule B-2 Rebuttal  
Page 3 of 9  
Witness: Reiker

Cochise (Bisbee, Sierra Vista)

Line No.	Description	[A] Actual End of Test Year	[B] Total Pro Forma Adjustments	[C] Adjusted Test Year - As Filed	[D] Rebuttal Adj. RB-1	[E] Rebuttal Adj. RB-2	[F] Rebuttal Adj. RB-3	[G] Rebuttal Rate Base Adjustments		[H] Rebuttal BLANK	[I] Rebuttal BLANK	[J] Rebuttal Adj. RB-5	[K] Total Rebuttal Adjustments	[L] Adjusted Test Year - Rebuttal
								Rebuttal	Rebuttal					
1														
2	Plant Classification													
3	Intangible Plant	\$ 43,396	\$ 658	\$ 44,054										\$ 44,054
4	Source of Supply Plant	1,649,590	6	1,649,595										1,649,595
5	Pumping Plant	1,715,876	-	1,715,876										1,715,876
6	Water Treatment Plant	143,024	147	143,171										143,171
7	Transmission & Distribution Plant	15,274,344	725,358	15,999,702										15,999,702
8	General Plant	933,254	507,285	1,440,538										1,440,538
9	Total Gross Plant in Service	\$ 19,759,483	\$ 1,233,453	\$ 20,992,936	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 443	\$ (122,677)	\$ 1,440,981
10														
11	Less:													
12	Accumulated Depreciation	7,381,827	125,116	7,506,943										7,506,982
13	Net Plant in Service	\$ 12,377,656	\$ 1,108,337	\$ 13,485,994	\$ -	\$ -	\$ (122,677)	\$ -	\$ -	\$ -	\$ -	\$ 404	\$ (122,273)	\$ 13,363,720
14														
15	Less:													
16	Advances in Aid of Construction	1,632,190	-	1,632,190										1,632,190
17	Contributions in Aid of Construction:													
18	Gross	2,198,794	-	2,198,794										2,198,794
19	Accumulated Amortization	(439,381)	-	(439,381)										(439,381)
20	Net Contributions in Aid of Construction	\$ 1,759,413	\$ -	\$ 1,759,413	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,759,413
21														
22	Deferred Income Tax	-	1,823,964	1,823,964										1,823,964
23	Customer Deposits	38,290	-	38,290										38,290
24														
25	Add:													
26	Working Capital	318,702	-	318,702										318,702
27	Net Regulatory Asset / (Liability)	-	-	-										-
28														
29														
30	Total Rate Base	\$ 9,266,466	\$ (715,627)	\$ 8,550,839	\$ -	\$ -	\$ (122,677)	\$ (2,875)	\$ -	\$ -	\$ -	\$ 404	\$ (125,148)	\$ 8,425,690
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Supporting Schedules:  
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Oracle												
Line No.	[A] Actual End of Test Year	[B] Total Pro Forma Adjustments	[C] Adjusted Test Year - As Filed	[D]		[E]		[F]		[G]		[L] Adjusted Test Year - Rebuttal
				Rebuttal Adj. RB-1	Rebuttal Adj. RB-2	Rebuttal Adj. RB-3	Rebuttal Adj. RB-4	Rebuttal BLANK	Rebuttal BLANK	Rebuttal Adj. RB-5	[K] Total Rebuttal Adjustments	
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## SaddleBrooke Ranch

Line No.	[A] Actual End of Test Year	[B] Total Pro Forma Adjustments	[C] Adjusted Test Year - As Filed	[D] Rebuttal Adj. RB-1		[E] Rebuttal Adj. RB-2		[F] Rebuttal Adj. RB-3		[G] Rebuttal Rate Base Rebuttal Adj. RB-4		[H] Rebuttal BLANK		[I] Rebuttal BLANK		[J] Rebuttal Adj. RB-5		[K] Total Rebuttal Adjustments	[L] Adjusted Test Year - Rebuttal
				Rebuttal	Adj. RB-1	Rebuttal	Adj. RB-2	Rebuttal	Adj. RB-3	Rebuttal	Adj. RB-4	Rebuttal	BLANK	Rebuttal	BLANK	Rebuttal	Adj. RB-5		
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Winkelman												
	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]	[K]	[L]
	Actual End of Test Year	Total Pro Forma Adjustments	Adjusted Test Year - As Filed	Rebuttal Adj. RB-1	Rebuttal Adj. RB-2	Rebuttal Adj. RB-3	Rebuttal Adj. RB-4	Rebuttal BLANK	Rebuttal BLANK	Rebuttal Adj. RB-5	Total Rebuttal Adjustments	Adjusted Test Year - Rebuttal
1												
2												
3	\$ 2,117	\$ 17	\$ 2,134							\$ -	\$ -	\$ 2,134
4	51,660	0	51,660							-	-	51,660
5	163,932	-	163,932							-	-	163,932
6	27,189	4	27,193							-	-	27,193
7	313,599	12	313,610							-	-	313,610
8	19,482	13,405	32,887							12	12	32,899
9	\$ 577,978	\$ 13,438	\$ 591,416	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 12	\$ 12	\$ 591,428
10												
11	Less:											
12												
13	217,083	3,124	220,207							1	1	220,208
14	\$ 360,895	\$ 10,314	\$ 371,209	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 11	\$ 11	\$ 371,219
15												
16	Less:											
17												
18	Advances in Aid of Construction	-	-								-	-
19	Contributions in Aid of Construction:											
20	Gross	21,225	21,225								-	21,225
21	Accumulated Amortization	(984)	(984)								-	(984)
22	Net Contributions in Aid of Construction	\$ 20,241	\$ 20,241	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 20,241
23	Deferred Income Tax	-	48,199								-	48,199
24	Customer Deposits	1,249	1,249								-	1,249
25	Add:											
26	Working Capital	5,343	5,343				(483)				(483)	4,860
27	Net Regulatory Asset / (Liability)	-	-								-	-
28												
29												
30	Total Rate Base	\$ 344,748	\$ (37,885)	\$ 306,862	\$ -	\$ -	\$ (483)	\$ -	\$ -	\$ 11	\$ (472)	\$ 306,390
31												



**ARIZONA WATER COMPANY**

Test Year Ended December 31, 2010  
Original Cost Rate Base Pro Forma Adjustments

Exhibit  
Schedule B-2 Rebuttal  
Page 8 of 9  
Witness: Reiker

Phoenix Office

Line No.	(A) Actual End of Test Year	(B) Total Pro Forma Adjustments	(C) Adjusted Test Year - As Filed	(D) Rebuttal Adj. RB-1	(E) Rebuttal Adj. RB-2	(F) Rebuttal Adj. RB-3	(G) Rebuttal Rate Base Adjustments Rebuttal Adj. RB-4	(H) Rebuttal BLANK	(I) Rebuttal BLANK	(J) Rebuttal Adj. RB-5	(K) Total Rebuttal Adjustments	(L) Adjusted Test Year - Rebuttal
1												
2												
3	\$ 9,148	\$ (9,148)	\$ -			\$ -				\$ -	\$ -	\$ -
4	-	-	-			-				-	-	-
5	-	-	-			-				-	-	-
6	-	-	-			-				-	-	-
7	-	-	-			-				-	-	-
8	6,883,048	(6,883,048)	-			6,163				(6,163)	-	-
9	\$ 6,892,196	\$ (6,892,196)	\$ -	\$ -	\$ -	\$ 6,163	\$ -	\$ -	\$ -	\$ (6,163)	\$ -	\$ -
10												
11												
12	1,587,468	(1,587,468)	-	547								-
13	\$ 5,304,728	\$ (5,304,728)	\$ -	\$ (547)	\$ -	\$ 6,163	\$ -	\$ -	\$ -	\$ (547)	\$ -	\$ -
14												
15												
16	-	-	-									-
17	-	-	-									-
18	-	-	-									-
19	-	-	-									-
20												
21	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
22												
23	25,368,073	(25,368,073)	-									-
24	-	-	-									-
25												
26	-	-	-									-
27	-	-	-									-
28												
29												
30	\$ (20,063,345)	\$ 20,063,345	\$ -	\$ (547)	\$ -	\$ 6,163	\$ -	\$ -	\$ -	\$ (5,617)	\$ -	\$ -
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**ARIZONA WATER COMPANY**

Test Year Ended December 31, 2010  
Original Cost Rate Base Pro Forma Adjustments

**Meter Shop**

Line No.	Plant Classification	(A) Actual End of Test Year	(B) Total Pro Forma Adjustments	(C) Adjusted Test Year - As Filed	(D) Rebuttal Adj. RB-1	(E) Rebuttal Adj. RB-2	(F) Rebuttal Adj. RB-3	(G) Rebuttal Rate Base Adjustments Rebuttal Adj. RB-4	(H) Rebuttal BLANK	(I) Rebuttal BLANK	(J) Rebuttal Adj. RB-5	(K) Total Rebuttal Adjustments	(L) Adjusted Test Year - Rebuttal
1													
2	Plant Classification												
3	Intangible Plant												
4	Source of Supply Plant	80	(80)	-									
5	Pumping Plant												
6	Water Treatment Plant	2,050	(2,050)	-									
7	Transmission & Distribution Plant	6,066	(6,066)	-									
8	General Plant	146,809	(146,809)	-									
9	Total Gross Plant in Service	\$ 155,005	\$ (155,005)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
10													
11	Less:												
12	Accumulated Depreciation	56,404	(56,404)	-									
13	Net Plant in Service	\$ 98,601	\$ (98,601)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
14													
15	Less:												
16	Advances in Aid of Construction												
17	Contributions in Aid of Construction:												
18	Gross												
19	Accumulated Amortization												
20	Net Contributions in Aid of Construction												
21													
22	Deferred Income Tax												
23	Customer Deposits												
24													
25	Add:												
26	Working Capital												
27	Net Regulatory Asset / (Liability)												
28													
29													
30	Total Rate Base	\$ 98,601	\$ (98,601)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
31													
32													
33													
34													
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**ARIZONA WATER COMPANY**

Test Year Ended December 31, 2010

Rebuttal Rate Base Adjustment RB-1

Partially Accept Staff Rate Base Adjustment No. 1 - Retire Plant No Longer in Service (Superstition)

Line No.		Depreciation Rate	Superstition		
			[A] Retire Well Nos. 8 & 17 - Miami	[B] Total Plant	[C] Depreciation Expense (Full Year)
1	Intangible Plant				
2	301 Organization	0.00%			
3	302 Franchises	note_1	\$ -	\$ -	-
4	303 Other Intangibles	note_1	-	-	-
5	Subtotal Intangible Plant		\$ -	\$ -	-
6	Source of Supply Plant				
7	310.1 Water Rights	0.00%			-
8	310.3 Other Source of Supply Land	0.00%			-
9	310.4 Wells - Other	note_1	-	-	-
10	314 Wells	3.13%			
11	Subtotal Source of Sup. Plant		(7,699)	(7,699)	(241)
12	Pumping Plant		(7,699)	(7,699)	(241)
13	320 Pumping Plant Land	0.00%			-
14	321 Pumping Plant Struct. & Improv.	2.86%	(115)	(115)	(3)
15	325 Electric Pumping Equipment	5.88%	(1,540)	(1,540)	(91)
16	328 Gas Engine Equipment	4.00%			-
17	Subtotal Pumping Plant		(1,655)	(1,655)	(94)
18	Water Treatment Plant				
19	330 Water Treatment Plant Land	0.00%			-
20	331 Water Trtmt. Struct. & Improv.	2.50%			-
21	332 Water Treatment Equipment	2.86%			-
22	Subtotal Water Trtmt. Plant		-	-	-
23	Transmission & Distribution Plant				
24	340 Trans. and Dist. Land	0.00%			-
25	342 Storage Tanks	2.00%			-
26	343 Trans. & Dist. Mains	1.79%			-
27	344 Fire Sprinkler Taps	2.00%			-
28	345 Services	2.38%			-
29	346 Meters	4.55%			-
30	348 Hydrants	1.82%			-
31	Subtotal Trans. & Dist.		-	-	-
32	General Plant				
33	389 General Plant Land	0.00%			-
34	390 General Plant Structures	2.50%			-
35	390.1 Leasehold Improvements	note_2			-
36	391 Office Furniture & Equipment	6.67%			-
37	393 Warehouse Equipment	5.00%			-
38	394 Tools, Shop & Garage Equip.	4.00%			-
39	395 Laboratory Equipment	5.00%			-
40	396 Power Operated Equipment	6.67%			-
41	397 Communication Equipment	6.67%			-
42	398 Miscellaneous Equipment	3.33%			-
43	Subtotal General Plant		-	-	-
44	Total Utility Plant		(9,354)	(9,354)	(335)
45	Accumulated Depreciation			\$ (9,354)	
46	Net Plant			\$ -	

ARIZONA WATER COMPANY

Test Year Ended December 31, 2010

Rebuttal Rate Base Adjustment RB-2

Accept Staff Rate Base Adjustment No. 2 - Capitalize Water Testing Expense (SaddleBrooke)

		SaddleBrooke Ranch		
Line No.		(A) Retire Well Nos. 8 & 17 - Miami	(B) Total Plant	(C) Depreciation Expense (Full Year)
		Depreciation Rate		
1	Intangible Plant			
2	301 Organization	0.00%	\$ -	\$ -
3	302 Franchises	note_1	-	-
4	303 Other Intangibles	note_1	-	-
5	Subtotal Intangible Plant			
6	Source of Supply Plant			
7	310.1 Water Rights	0.00%	-	-
8	310.3 Other Source of Supply Land	0.00%	-	-
9	310.4 Wells - Other	note_1	-	-
10	314 Wells	3.13%	9,510	298
11	Subtotal Source of Sup. Plant		9,510	298
12	Pumping Plant			
13	320 Pumping Plant Land	0.00%	-	-
14	321 Pumping Plant Struct. & Improv.	2.86%	-	-
15	325 Electric Pumping Equipment	5.88%	-	-
16	328 Gas Engine Equipment	4.00%	-	-
17	Subtotal Pumping Plant		-	\$ -
18	Water Treatment Plant			
19	330 Water Treatment Plant Land	0.00%	-	-
20	331 Water Trtmt. Struct. & Improv.	2.50%	-	-
21	332 Water Treatment Equipment	2.86%	-	-
22	Subtotal Water Trtmt. Plant		-	\$ -
23	Transmission & Distribution Plant			
24	340 Trans. and Dist. Land	0.00%	-	-
25	342 Storage Tanks	2.00%	-	-
26	343 Trans. & Dist. Mains	1.79%	-	-
27	344 Fire Sprinkler Taps	2.00%	-	-
28	345 Services	2.38%	-	-
29	346 Meters	4.55%	-	-
30	348 Hydrants	1.82%	-	-
31	Subtotal Trans. & Dist.		-	\$ -
32	General Plant			
33	389 General Plant Land	0.00%	-	-
34	390 General Plant Structures	2.50%	-	-
35	390.1 Leasehold Improvements	note_2	-	-
36	391 Office Furniture & Equipment	6.67%	-	-
37	393 Warehouse Equipment	5.00%	-	-
38	394 Tools, Shop & Garage Equip.	4.00%	-	-
39	395 Laboratory Equipment	5.00%	-	-
40	396 Power Operated Equipment	6.67%	-	-
41	397 Communication Equipment	6.67%	-	-
42	398 Miscellaneous Equipment	3.33%	-	-
43	Subtotal General Plant		-	\$ -
44	Total Utility Plant		9,510	298
45				
46	Accumulated Depreciation (1/2-year convention)		\$ -	\$ 149
47				
48	Net Plant		\$ -	\$ 9,361
49				
50				
51				
52				
53				
54				
55				

Line No.		Depreciation Rate	Superstition			Adjstmt to Depreciation Expense
			[A] 1-4226 As Filed	[B] Work Authorization 1-4226 Actual Cost <sup>1</sup>	[C] 1-4226 Increase / (Decrease)	
1	Intangible Plant					
2	301 Organization	0.00%		\$ -	-	\$ -
3	302 Franchises	n/a			-	-
4	303 Other Intangibles	n/a			-	-
5	Subtotal Intangible Plant		\$ -	\$ -	-	\$ -
6	Source of Supply Plant					
7	310.1 Water Rights	0.00%			-	-
8	310.3 Other Source of Supply Land	0.00%			-	-
9	310.4 Wells - Other	n/a			-	-
10	314 Wells	3.13%			-	-
11	Subtotal Source of Sup. Plant		\$ -	\$ -	-	\$ -
12	Pumping Plant					
13	320 Pumping Plant Land	0.00%			-	-
14	321 Pumping Plant Struct. & Improv.	2.86%			-	-
15	325 Electric Pumping Equipment	5.88%			-	-
16	328 Gas Engine Equipment	4.00%			-	-
17	Subtotal Pumping Plant		\$ -	\$ -	-	\$ -
18	Water Treatment Plant					
19	330 Water Treatment Plant Land	0.00%			-	-
20	331 Water Trtmt. Struct. & Improv.	2.50%			-	-
21	332 Water Treatment Equipment	2.86%	2,872,067	2,789,200	(82,867)	(2,370)
22	Subtotal Water Trtmt. Plant		\$ 2,872,067	\$ 2,789,200	\$(82,867)	\$(2,370)
23	Transmission & Distribution Plant					
24	340 Trans. and Dist. Land	0.00%			-	-
25	342 Storage Tanks	2.00%		764	764	15
26	343 Trans. & Dist. Mains	1.79%			-	-
27	344 Fire Sprinkler Taps	2.00%			-	-
28	345 Services	2.38%			-	-
29	346 Meters	4.55%			-	-
30	348 Hydrants	1.82%			-	-
31	Subtotal Trans. & Dist. General Plant		\$ -	\$ 764	\$ 764	\$ 15
32	General Plant					
33	389 General Plant Land	0.00%			-	-
34	390 General Plant Structures	2.50%			-	-
35	390.1 Leasehold Improvements	n/a			-	-
36	391 Office Furniture & Equipment	6.67%			-	-
37	393 Warehouse Equipment	5.00%			-	-
38	394 Tools, Shop & Garage Equip.	4.00%			-	-
39	395 Laboratory Equipment	5.00%			-	-
40	396 Power Operated Equipment	6.67%			-	-
41	397 Communication Equipment	6.67%			-	-
42	398 Miscellaneous Equipment	3.33%			-	-
43	Subtotal General Plant		\$ -	\$ -	-	\$ -
44	Total Utility Plant		\$ 2,872,067	\$ 2,789,964	\$(82,103)	\$(2,355)
45	Accumulated Depreciation (1/2-Year Convention)					\$ (1,177)
46	Net Plant					\$ (80,926)

<sup>1</sup>Updated costs provided in response to Staff data request JMM 2.22/RUCO data request 1.30.

Line No.		Supersition (Continued)				Adjstmt to Depreciation Expense
		(A) 1-4787 As Filed	(B) 1-4787 Actual Cost <sup>1</sup>	(C) Work Authorization 1-4787 Increase / (Decrease)	(D)	
1	Intangible Plant					
2	301 Organization	0.00%		\$ -		\$ -
3	302 Franchises	n/a		n/a		-
4	303 Other Intangibles					-
5	Subtotal Intangible Plant	\$ -	\$ -	\$ -		\$ -
6	Source of Supply Plant					
7	310.1 Water Rights	0.00%		-		-
8	310.3 Other Source of Supply Land	0.00%		-		-
9	310.4 Wells - Other	n/a		-		-
10	314 Wells	3.13%		-		-
11	Subtotal Source of Sup. Plant	\$ -	\$ -	\$ -		\$ -
12	Pumping Plant					
13	320 Pumping Plant Land	0.00%		-		-
14	321 Pumping Plant Struct. & Improv.	2.86%		-		-
15	325 Electric Pumping Equipment	5.88%		-		-
16	328 Gas Engine Equipment	4.00%		-		-
17	Subtotal Pumping Plant	\$ -	\$ -	\$ -		\$ -
18	Water Treatment Plant					
19	330 Water Treatment Plant Land	0.00%		-		-
20	331 Water Trtmt. Struct. & Improv.	2.50%		-		-
21	332 Water Treatment Equipment	2.86%		-		-
22	Subtotal Water Trtmt. Plant	\$ -	\$ -	\$ -		\$ -
23	Transmission & Distribution Plant					
24	340 Trans. and Dist. Land	0.00%		-		-
25	342 Storage Tanks	2.00%		-		-
26	343 Trans. & Dist. Mains	1.79%	21,620	21,897	277	5
27	344 Fire Sprinkler Taps	2.00%		-		-
28	345 Services	2.38%		-		-
29	346 Meters	4.55%		-		-
30	348 Hydrants	1.82%		-		-
31	Subtotal Trans. & Dist.	\$ 21,620	\$ 21,897	\$ 277		\$ 5
32	General Plant					
33	389 General Plant Land	0.00%		-		-
34	390 General Plant Structures	2.50%		-		-
35	390.1 Leasehold Improvements	n/a		-		-
36	391 Office Furniture & Equipment	6.67%		-		-
37	393 Warehouse Equipment	5.00%		-		-
38	394 Tools, Shop & Garage Equip.	4.00%		-		-
39	395 Laboratory Equipment	5.00%		-		-
40	396 Power Operated Equipment	6.67%		-		-
41	397 Communication Equipment	6.67%		-		-
42	398 Miscellaneous Equipment	3.33%		-		-
43	Subtotal General Plant	\$ -	\$ -	\$ -		\$ -
44	Total Utility Plant	\$ 21,620	\$ 21,897	\$ 277		\$ 5
45	Accumulated Depreciation (1/2-Year Convention)					
46	Net Plant					
47						2
48						275
49						
50						
51						
52						
53						
54						
55						

<sup>1</sup>Updated costs provided in response to Staff data request JMM 2.22/RUCO data request 1.30.

ARIZONA WATER COMPANY

Test Year Ended December 31, 2010

Rebuttal Rate Base Adjustment RB-3 (Continued)

Accept RUCO Rate Base Adjustment No. 1 - True-up Post-Test Year Plant to Reflect Actual Costs

		Superstition (Continued)			
Line No.		Depreciation Rate	[A]		[D]
			1-4788 As Filed	[B] Work Authorization 1-4788 Actual Cost <sup>1</sup>	
1	Intangible Plant				
2	301 Organization	0.00%		\$ -	\$ -
3	302 Franchises	n/a		-	-
4	303 Other Intangibles	n/a		-	-
5	Subtotal Intangible Plant		\$ -	\$ -	\$ -
6	Source of Supply Plant				
7	310.1 Water Rights	0.00%		-	-
8	310.3 Other Source of Supply Land	0.00%		-	-
9	310.4 Wells - Other	n/a		-	-
10	314 Wells	3.13%		-	-
11	Subtotal Source of Sup. Plant		\$ -	\$ -	\$ -
12	Pumping Plant				
13	320 Pumping Plant Land	0.00%		-	-
14	321 Pumping Plant Struct. & Improv.	2.86%		-	-
15	325 Electric Pumping Equipment	5.88%		-	-
16	328 Gas Engine Equipment	4.00%		-	-
17	Subtotal Pumping Plant		\$ -	\$ -	\$ -
18	Water Treatment Plant				
19	330 Water Treatment Plant Land	0.00%		-	-
20	331 Water Trtmt. Struct. & Improv.	2.50%		-	-
21	332 Water Treatment Equipment	2.86%		-	-
22	Subtotal Water Trtmt. Plant		\$ -	\$ -	\$ -
23	Transmission & Distribution Plant				
24	340 Trans. and Dist. Land	0.00%		-	-
25	342 Storage Tanks	2.00%		-	-
26	343 Trans. & Dist. Mains	1.79%		-	-
27	344 Fire Sprinkler Taps	2.00%		-	-
28	345 Services	2.38%		-	-
29	346 Meters	4.55%		-	-
30	348 Hydrants	1.82%		-	-
31	Subtotal Trans. & Dist.		\$ -	\$ -	\$ -
32	General Plant				
33	389 General Plant Land	0.00%		-	-
34	390 General Plant Structures	2.50%		-	-
35	390.1 Leasehold Improvements	n/a		-	-
36	391 Office Furniture & Equipment	6.67%		-	-
37	393 Warehouse Equipment	5.00%		-	-
38	394 Tools, Shop & Garage Equip.	4.00%		-	-
39	395 Laboratory Equipment	5.00%		-	-
40	396 Power Operated Equipment	6.67%		-	-
41	397 Communication Equipment	6.67%	14,088	20,587	434
42	398 Miscellaneous Equipment	3.33%		-	-
43	Subtotal General Plant		\$ 14,088	\$ 20,587	\$ 434
44	Total Utility Plant		\$ 14,088	\$ 20,587	\$ 434
45	Accumulated Depreciation (1/2-Year Convention)				
46					
47					
48					
49	Net Plant				
50					
51					
52					
53					
54					
55					

<sup>1</sup>Updated costs provided in response to Staff data request JMM 2.22/RUCO data request 1.30.

Line No.		Superstition (Continued)			
		(A) 1-4789 As Filed	(B) Work Authorization 1-4789 Actual Cost <sup>1</sup>	(C) 1-4789 Increase / (Decrease)	(D) Adjstm't to Depreciation Expense
1	Intangible Plant				
2	301 Organization	0.00%		\$ -	\$ -
3	302 Franchises	n/a		-	-
4	303 Other Intangibles	n/a		-	-
5	Subtotal Intangible Plant		\$ -	\$ -	\$ -
6	Source of Supply Plant				
7	310.1 Water Rights	0.00%		-	-
8	310.3 Other Source of Supply Land	0.00%		-	-
9	310.4 Wells - Other	n/a		-	-
10	314 Wells	3.13%		-	-
11	Subtotal Source of Sup. Plant		\$ -	\$ -	\$ -
12	Pumping Plant				
13	320 Pumping Plant Land	0.00%		-	-
14	321 Pumping Plant Struct. & Improv.	2.86%		-	-
15	325 Electric Pumping Equipment	5.88%		-	-
16	328 Gas Engine Equipment	4.00%		-	-
17	Subtotal Pumping Plant		\$ -	\$ -	\$ -
18	Water Treatment Plant				
19	330 Water Treatment Plant Land	0.00%		-	-
20	331 Water Trtmt. Struct. & Improv.	2.50%		-	-
21	332 Water Treatment Equipment	2.86%		-	-
22	Subtotal Water Trtmt. Plant		\$ -	\$ -	\$ -
23	Transmission & Distribution Plant				
24	340 Trans. and Dist. Land	0.00%		-	-
25	342 Storage Tanks	2.00%		-	-
26	343 Trans. & Dist. Mains	1.79%		-	-
27	344 Fire Sprinkler Taps	2.00%		-	-
28	345 Services	2.38%		-	-
29	346 Meters	4.55%		-	-
30	348 Hydrants	1.82%		-	-
31	Subtotal Trans. & Dist.		\$ -	\$ -	\$ -
32	General Plant				
33	389 General Plant Land	0.00%		-	-
34	390 General Plant Structures	2.50%		-	-
35	390.1 Leasehold Improvements	n/a		-	-
36	391 Office Furniture & Equipment	6.67%		-	-
37	393 Warehouse Equipment	5.00%		-	-
38	394 Tools, Shop & Garage Equip.	4.00%		-	-
39	395 Laboratory Equipment	5.00%		-	-
40	396 Power Operated Equipment	6.67%		-	-
41	397 Communication Equipment	6.67%	13,800	4,498 (9,302)	(620)
42	398 Miscellaneous Equipment	3.33%		-	-
43	Subtotal General Plant		\$ 13,800	\$ 4,498 (9,302)	\$ (620)
44	Total Utility Plant		\$ 13,800	\$ 4,498 (9,302)	\$ (620)
45	Accumulated Depreciation (1/2-Year Convention)				\$ (310)
46					\$ (8,992)
47	Net Plant				\$ (8,992)

<sup>1</sup> Updated costs provided in response to Staff data request JMM 2.22/RUCO data request 1.30.



**ARIZONA WATER COMPANY**

Test Year Ended December 31, 2010

Rebuttal Rate Base Adjustment RB-3 (Continued)

Accept RUCO Rate Base Adjustment No. 1 - True-up Post-Test Year Plant to Reflect Actual Costs

		Superstition (Continued)			
Line No.		(A)	(B)	(C)	(D)
		1-4792 AS Filed	Work Authorization 1-4792 Actual Cost	1-4792 Increase / (Decrease)	Adjustmt' to Depreciation Expense
1	Intangible Plant				
2	301 Organization	0.00%		\$ -	\$ -
3	302 Franchises	n/a		-	-
4	303 Other Intangibles	n/a		-	-
5	Subtotal Intangible Plant	\$ -	\$ -	\$ -	\$ -
6	Source of Supply Plant				
7	310.1 Water Rights	0.00%		-	-
8	310.3 Other Source of Supply Land	0.00%		-	-
9	310.4 Wells - Other	n/a		-	-
10	314 Wells	3.13%		-	-
11	Subtotal Source of Sup. Plant	\$ -	\$ -	\$ -	\$ -
12	Pumping Plant				
13	320 Pumping Plant Land	0.00%		-	-
14	321 Pumping Plant Struct. & Improv.	2.86%		-	-
15	325 Electric Pumping Equipment	5.88%	107,305	71,791	4,221
16	328 Gas Engine Equipment	4.00%	35,514	-	-
17	Subtotal Pumping Plant	\$ 35,514	\$ 107,305	\$ 71,791	\$ 4,221
18	Water Treatment Plant				
19	330 Water Treatment Plant Land	0.00%		-	-
20	331 Water Trtmt. Struct. & Improv.	2.50%		-	-
21	332 Water Treatment Equipment	2.86%		-	-
22	Subtotal Water Trtmt. Plant	\$ -	\$ -	\$ -	\$ -
23	Transmission & Distribution Plant				
24	340 Trans. and Dist. Land	0.00%		-	-
25	342 Storage Tanks	2.00%		-	-
26	343 Trans. & Dist. Mains	1.79%		-	-
27	344 Fire Sprinkler Taps	2.00%		-	-
28	345 Services	2.38%		-	-
29	346 Meters	4.55%		-	-
30	348 Hydrants	1.82%		-	-
31	Subtotal Trans. & Dist.	\$ -	\$ -	\$ -	\$ -
32	General Plant				
33	389 General Plant Land	0.00%		-	-
34	390 General Plant Structures	2.50%		-	-
35	390.1 Leasehold Improvements	n/a		-	-
36	391 Office Furniture & Equipment	6.67%		-	-
37	393 Warehouse Equipment	5.00%		-	-
38	394 Tools, Shop & Garage Equip.	4.00%		-	-
39	395 Laboratory Equipment	5.00%		-	-
40	396 Power Operated Equipment	6.67%		-	-
41	397 Communication Equipment	6.67%		-	-
42	398 Miscellaneous Equipment	3.33%		-	-
43	Subtotal General Plant	\$ -	\$ -	\$ -	\$ -
44	Total Utility Plant	\$ 35,514	\$ 107,305	\$ 71,791	\$ 4,221
45	Accumulated Depreciation (1/2-Year Convention)				
46					
47					
48	Net Plant				
49					
50					
51					
52					
53					
54					
55					

<sup>1</sup>Updated costs provided in response to Staff data request JMM 2.22/RUCO data request 1.30.

Line No.		Superstition (Continued)				Adjustmt' to Depreciation Expense
		[A] 1-4793 As Filed	[B] Work Authorization 1-4793 Actual Cost <sup>1</sup>	[C] 1-4793 Increase / (Decrease)	[D]	
1	Intangible Plant					
2	301 Organization	0.00%		\$ -		\$ -
3	302 Franchises	n/a		-		-
4	303 Other Intangibles	n/a		-		-
5	Subtotal Intangible Plant		\$ -	\$ -		\$ -
6	Source of Supply Plant					
7	310.1 Water Rights	0.00%		-		-
8	310.3 Other Source of Supply Land	0.00%		-		-
9	310.4 Wells - Other	n/a		-		-
10	314 Wells	3.13%		-		-
11	Subtotal Source of Sup. Plant		\$ -	\$ -		\$ -
12	Pumping Plant					
13	320 Pumping Plant Land	0.00%		-		-
14	321 Pumping Plant Struct. & Improv.	2.86%		-		-
15	325 Electric Pumping Equipment	5.88%		-		-
16	328 Gas Engine Equipment	4.00%		-		-
17	Subtotal Pumping Plant		\$ -	\$ -		\$ -
18	Water Treatment Plant					
19	330 Water Treatment Plant Land	0.00%		-		-
20	331 Water Trtmt. Struct. & Improv.	2.50%		-		-
21	332 Water Treatment Equipment	2.86%		-		-
22	Subtotal Water Trtmt. Plant		\$ -	\$ -		\$ -
23	Transmission & Distribution Plant					
24	340 Trans. and Dist. Land	0.00%		-		-
25	342 Storage Tanks	2.00%		-		-
26	343 Trans. & Dist. Mains	1.79%	186,769	174,188 (12,581)		(225)
27	344 Fire Sprinkler Taps	2.00%		-		-
28	345 Services	2.38%		-		-
29	346 Meters	4.55%		-		-
30	348 Hydrants	1.82%		-		-
31	Subtotal Trans. & Dist.		\$ 186,769	\$ 174,188 (12,581)		\$ (225)
32	General Plant					
33	389 General Plant Land	0.00%		-		-
34	390 General Plant Structures	2.50%		-		-
35	390.1 Leasehold Improvements	n/a		-		-
36	391 Office Furniture & Equipment	6.67%		-		-
37	393 Warehouse Equipment	5.00%		-		-
38	394 Tools, Shop & Garage Equip.	4.00%		-		-
39	395 Laboratory Equipment	5.00%		-		-
40	396 Power Operated Equipment	6.67%		-		-
41	397 Communication Equipment	6.67%	2,238	2,238		149
42	398 Miscellaneous Equipment	3.33%		-		-
43	Subtotal General Plant		\$ -	\$ 2,238		\$ 149
44	Total Utility Plant		\$ 186,769	\$ 176,426 (10,343)		\$ (76)
45						
46	Accumulated Depreciation (1/2-Year Convention)					\$ (38)
47						
48	Net Plant					\$ (10,305)
49						
50						
51						
52						
53						
54						
55						

<sup>1</sup>Updated costs provided in response to Staff data request JMM 2.22/RUCO data request 1.30.

ARIZONA WATER COMPANY

Test Year Ended December 31, 2010

Rebuttal Rate Base Adjustment RB-3 (Continued)

Accept RUCO Rate Base Adjustment No. 1 - True-up Post-Test Year Plant to Reflect Actual Costs

Line No.		Superstition (Continued)				Adjstmt' to Depreciation Expense
		(A) 1-4794 As Filed	(B) Work Authorization 1-4794 Actual Cost <sup>1</sup>	(C) 1-4794 Increase / (Decrease)	(D)	
1	Intangible Plant					
2	301 Organization	0.00%		\$ -		\$ -
3	302 Franchises	n/a		-		-
4	303 Other Intangibles	n/a		-		-
5	Subtotal Intangible Plant		\$ -	\$ -		\$ -
6	Source of Supply Plant					
7	310.1 Water Rights	0.00%		-		-
8	310.3 Other Source of Supply Land	0.00%		-		-
9	310.4 Wells - Other	n/a		-		-
10	314 Wells	3.13%		-		-
11	Subtotal Source of Sup. Plant		\$ -	\$ -		\$ -
12	Pumping Plant					
13	320 Pumping Plant Land	0.00%		-		-
14	321 Pumping Plant Struct. & Improv.	2.86%		-		-
15	325 Electric Pumping Equipment	5.88%		-		-
16	328 Gas Engine Equipment	4.00%		-		-
17	Subtotal Pumping Plant		\$ -	\$ -		\$ -
18	Water Treatment Plant					
19	330 Water Treatment Plant Land	0.00%		-		-
20	331 Water Trtmt. Struct. & Improv.	2.50%		-		-
21	332 Water Treatment Equipment	2.86%		-		-
22	Subtotal Water Trtmt. Plant		\$ -	\$ -		\$ -
23	Transmission & Distribution Plant					
24	340 Trans. and Dist. Land	0.00%		-		-
25	342 Storage Tanks	2.00%		-		-
26	343 Trans. & Dist. Mains	1.79%	156,984	133,921 (23,063)		(413)
27	344 Fire Sprinkler Taps	2.00%		-		-
28	345 Services	2.38%		-		-
29	346 Meters	4.55%		-		-
30	348 Hydrants	1.82%		-		-
31	Subtotal Trans. & Dist. General Plant		\$ 156,984	\$ 133,921 (23,063)		\$ (413)
32	General Plant					
33	389 General Plant Land	0.00%		-		-
34	390 General Plant Structures	2.50%		-		-
35	390.1 Leasehold Improvements	n/a		-		-
36	391 Office Furniture & Equipment	6.67%		-		-
37	393 Warehouse Equipment	5.00%		-		-
38	394 Tools, Shop & Garage Equip.	4.00%		-		-
39	395 Laboratory Equipment	5.00%		-		-
40	396 Power Operated Equipment	6.67%		-		-
41	397 Communication Equipment	6.67%		-		-
42	398 Miscellaneous Equipment	3.33%		-		-
43	Subtotal General Plant		\$ -	\$ -		\$ -
44	Total Utility Plant		\$ 156,984	\$ 133,921 (23,063)		\$ (413)
45						
46	Accumulated Depreciation (1/2-Year Convention)					\$ (206)
47						\$ (22,857)
48	Net Plant					
49						
50						
51						
52						
53						
54						
55						

<sup>1</sup>Updated costs provided in response to Staff data request JMM 2.22/RUCO data request 1.30.

Line No.		Superstition (Continued)			
		[A]	[B]	[C]	[D]
		1-4833 As Filed	Work Authorization 1-4833 Actual Cost <sup>1</sup>	1-4833 Increase / (Decrease)	Adjstnt' to Depreciation Expense
1	Intangible Plant				
2	301 Organization	0.00%		\$ -	\$ -
3	302 Franchises	n/a		-	-
4	303 Other Intangibles	n/a		-	-
5	Subtotal Intangible Plant	\$ -	\$ -	\$ -	\$ -
6	Source of Supply Plant				
7	310.1 Water Rights	0.00%		-	-
8	310.3 Other Source of Supply Land	0.00%		-	-
9	310.4 Wells - Other	n/a		-	-
10	314 Wells	3.13%		-	-
11	Subtotal Source of Sup. Plant	\$ -	\$ -	\$ -	\$ -
12	Pumping Plant				
13	320 Pumping Plant Land	0.00%		-	-
14	321 Pumping Plant Struct. & Improv.	2.86%		-	-
15	325 Electric Pumping Equipment	5.88%	14,721	(512)	(30)
16	328 Gas Engine Equipment	4.00%		-	-
17	Subtotal Pumping Plant	\$ 14,721	\$ 14,209	\$ (512)	\$ (30)
18	Water Treatment Plant				
19	330 Water Treatment Plant Land	0.00%		-	-
20	331 Water Trtmt. Struct. & Improv.	2.50%		-	-
21	332 Water Treatment Equipment	2.86%		-	-
22	Subtotal Water Trtmt. Plant	\$ -	\$ -	\$ -	\$ -
23	Transmission & Distribution Plant				
24	340 Trans. and Dist. Land	0.00%		-	-
25	342 Storage Tanks	2.00%		-	-
26	343 Trans. & Dist. Mains	1.79%		-	-
27	344 Fire Sprinkler Taps	2.00%		-	-
28	345 Services	2.38%		-	-
29	346 Meters	4.55%		-	-
30	348 Hydrants	1.82%		-	-
31	Subtotal Trans. & Dist.	\$ -	\$ -	\$ -	\$ -
32	General Plant				
33	389 General Plant Land	0.00%		-	-
34	390 General Plant Structures	2.50%		-	-
35	390.1 Leasehold Improvements	n/a		-	-
36	391 Office Furniture & Equipment	6.67%		-	-
37	393 Warehouse Equipment	5.00%		-	-
38	394 Tools, Shop & Garage Equip.	4.00%		-	-
39	395 Laboratory Equipment	5.00%		-	-
40	396 Power Operated Equipment	6.67%		-	-
41	397 Communication Equipment	6.67%		-	-
42	398 Miscellaneous Equipment	3.33%		-	-
43	Subtotal General Plant	\$ -	\$ -	\$ -	\$ -
44					
45	Total Utility Plant	\$ 14,721	\$ 14,209	\$ (512)	\$ (30)
46					
47	Accumulated Depreciation (1/2-Year Convention)				\$ (15)
48					
49	Net Plant				\$ (497)
50					
51					
52					
53					
54					
55					

<sup>1</sup>Updated costs provided in response to Staff data request JMM 2.22/RUCO data request 1.30.

Line No.		Superstition (Continued)			
		[A]	[B]	[C]	[D]
		1-4842 As Filed	Work Authorization 1-4842 Actual Cost <sup>1</sup>	1-4842 Increase / (Decrease)	Adjstmt' to Depreciation Expense
	Depreciation Rate				
1	Intangible Plant				
2	301 Organization	0.00%		\$ -	\$ -
3	302 Franchises	n/a		-	-
4	303 Other Intangibles	n/a		-	-
5	Subtotal Intangible Plant	\$ -	\$ -	\$ -	\$ -
6	Source of Supply Plant				
7	310.1 Water Rights	0.00%		-	-
8	310.3 Other Source of Supply Land	0.00%		-	-
9	310.4 Wells - Other	n/a		-	-
10	314 Wells	3.13%		-	-
11	Subtotal Source of Sup. Plant	\$ -	\$ -	\$ -	\$ -
12	Pumping Plant				
13	320 Pumping Plant Land	0.00%		-	-
14	321 Pumping Plant Struct. & Improv.	2.86%		-	-
15	325 Electric Pumping Equipment	5.88%	98,677	61,882 (36,795)	(2,164)
16	328 Gas Engine Equipment	4.00%		-	-
17	Subtotal Pumping Plant	\$ 98,677	\$ 61,882	\$ (36,795)	\$ (2,164)
18	Water Treatment Plant				
19	330 Water Treatment Plant Land	0.00%		-	-
20	331 Water Trtmt. Struct. & Improv.	2.50%		-	-
21	332 Water Treatment Equipment	2.86%		-	-
22	Subtotal Water Trtmt. Plant	\$ -	\$ -	\$ -	\$ -
23	Transmission & Distribution Plant				
24	340 Trans. and Dist. Land	0.00%		-	-
25	342 Storage Tanks	2.00%		-	-
26	343 Trans. & Dist. Mains	1.79%		-	-
27	344 Fire Sprinkler Taps	2.00%		-	-
28	345 Services	2.38%		-	-
29	346 Meters	4.55%		-	-
30	348 Hydrants	1.82%		-	-
31	Subtotal Trans. & Dist.	\$ -	\$ -	\$ -	\$ -
32	General Plant				
33	389 General Plant Land	0.00%		-	-
34	390 General Plant Structures	2.50%		-	-
35	390.1 Leasehold Improvements	n/a		-	-
36	391 Office Furniture & Equipment	6.67%		-	-
37	393 Warehouse Equipment	5.00%		-	-
38	394 Tools, Shop & Garage Equip.	4.00%		-	-
39	395 Laboratory Equipment	5.00%		-	-
40	396 Power Operated Equipment	6.67%		-	-
41	397 Communication Equipment	6.67%		-	-
42	398 Miscellaneous Equipment	3.33%		-	-
43	Subtotal General Plant	\$ -	\$ -	\$ -	\$ -
44	Total Utility Plant	\$ 98,677	\$ 61,882	\$ (36,795)	\$ (2,164)
45	Accumulated Depreciation (1/2-Year Convention)				\$ (1,082)
46	Net Plant				\$ (35,713)

<sup>1</sup> Updated costs provided in response to Staff data request JMM 2.22/RUCO data request 1.30.

Line No.		Depreciation Rate	Supersitition - Total				[D] Total Adjustmt' to Depreciation Expense
			[A] Total As Filed	[B] Work Authorization Total Actual Cost <sup>1</sup>	[C] Total Increase / (Decrease)		
1	Intangible Plant						
2	301 Organization	0.00%	\$ -	\$ -	\$ -	\$ -	
3	302 Franchises	n/a	-	-	-	-	
4	303 Other Intangibles	n/a	-	-	-	-	
5	Subtotal Intangible Plant		\$ -	\$ -	\$ -	\$ -	
6	Source of Supply Plant						
7	310.1 Water Rights	0.00%	-	-	-	-	
8	310.3 Other Source of Supply Land	0.00%	-	-	-	-	
9	310.4 Wells - Other	n/a	-	-	-	-	
10	314 Wells	3.13%	-	-	-	-	
11	Subtotal Source of Sup. Plant		\$ -	\$ -	\$ -	\$ -	
12	Pumping Plant						
13	320 Pumping Plant Land	0.00%	-	-	-	-	
14	321 Pumping Plant Struct. & Improv.	2.86%	-	-	-	-	
15	325 Electric Pumping Equipment	5.88%	148,912	183,396	34,484	2,028	
16	328 Gas Engine Equipment	4.00%	-	-	-	-	
17	Subtotal Pumping Plant		\$ 148,912	\$ 183,396	\$ 34,484	\$ 2,028	
18	Water Treatment Plant						
19	330 Water Treatment Plant Land	0.00%	-	-	-	-	
20	331 Water Trtmt. Struct. & Improv.	2.50%	-	-	-	-	
21	332 Water Treatment Equipment	2.86%	2,872,067	2,789,200	(82,867)	(2,370)	
22	Subtotal Water Trtmt. Plant		\$ 2,872,067	\$ 2,789,200	\$ (82,867)	\$ (2,370)	
23	Transmission & Distribution Plant						
24	340 Trans. and Dist. Land	0.00%	-	-	-	-	
25	342 Storage Tanks	2.00%	-	764	764	15	
26	343 Trans. & Dist. Mains	1.79%	365,373	330,006	(35,367)	(633)	
27	344 Fire Sprinkler Taps	2.00%	-	-	-	-	
28	345 Services	2.38%	-	-	-	-	
29	346 Meters	4.55%	-	-	-	-	
30	348 Hydrants	1.82%	-	-	-	-	
31	Subtotal Trans. & Dist. General Plant		\$ 365,373	\$ 330,769	\$ (34,604)	\$ (618)	
32	General Plant						
33	389 General Plant Land	0.00%	-	-	-	-	
34	390 General Plant Structures	2.50%	-	-	-	-	
35	390.1 Leasehold Improvements	n/a	-	-	-	-	
36	391 Office Furniture & Equipment	6.67%	-	-	-	-	
37	393 Warehouse Equipment	5.00%	-	-	-	-	
38	394 Tools, Shop & Garage Equip.	4.00%	-	-	-	-	
39	395 Laboratory Equipment	5.00%	-	-	-	-	
40	396 Power Operated Equipment	6.67%	-	-	-	-	
41	397 Communication Equipment	6.67%	27,888	27,323	(565)	(38)	
42	398 Miscellaneous Equipment	3.33%	-	-	-	-	
43	Subtotal General Plant		\$ 27,888	\$ 27,323	\$ (565)	\$ (38)	
44	Total Utility Plant		\$ 3,414,240	\$ 3,330,689	\$ (83,551)	\$ (998)	
45	Accumulated Depreciation (1/2-Year Convention)						
46							
47							
48							
49	Net Plant						

<sup>1</sup>Updated costs provided in response to Staff data request JMM 2.22/RUCO data request 1.30.

**ARIZONA WATER COMPANY**

Test Year Ended December 31, 2010  
 Rebuttal Rate Base Adjustment RB-3 (Continued)  
 Accept RUCO Rate Base Adjustment No. 1 - True-up Post-Test Year Plant to Reflect Actual Costs

Schedule B-2 Rebuttal Appendix  
 Page 13 of 23  
 Witness: Reiker

Line No.		Cochise				Adjstmt to Depreciation Expense
		[A] 1-4692 As Filed	[B] Work Authorization 1-4692 Actual Cost <sup>1</sup>	[C] 1-4692 Increase / (Decrease)	[D]	
1	Intangible Plant					
2	301 Organization	0.00%	\$ -	-	\$ -	-
3	302 Franchises	n/a	-	-	-	-
4	303 Other Intangibles	n/a	-	-	-	-
5	Subtotal Intangible Plant		\$ -	\$ -	\$ -	
6	Source of Supply Plant					
7	310.1 Water Rights	0.00%	-	-	-	-
8	310.3 Other Source of Supply Land	0.00%	-	-	-	-
9	310.4 Wells - Other	n/a	-	-	-	-
10	314 Wells	3.13%	-	-	-	-
11	Subtotal Source of Sup. Plant		\$ -	\$ -	\$ -	
12	Pumping Plant					
13	320 Pumping Plant Land	0.00%	-	-	-	-
14	321 Pumping Plant Struct. & Improv.	2.86%	-	-	-	-
15	325 Electric Pumping Equipment	5.88%	-	-	-	-
16	328 Gas Engine Equipment	4.00%	-	-	-	-
17	Subtotal Pumping Plant		\$ -	\$ -	\$ -	
18	Water Treatment Plant					
19	330 Water Treatment Plant Land	0.00%	-	-	-	-
20	331 Water Trtmt. Struct. & Improv.	2.50%	-	-	-	-
21	332 Water Treatment Equipment	2.86%	-	-	-	-
22	Subtotal Water Trtmt. Plant		\$ -	\$ -	\$ -	
23	Transmission & Distribution Plant					
24	340 Trans. and Dist. Land	0.00%	-	-	-	-
25	342 Storage Tanks	2.00%	-	-	-	-
26	343 Trans. & Dist. Mains	1.79%	149,668	139,361	(10,307)	(184)
27	344 Fire Sprinkler Taps	2.00%	-	-	-	-
28	345 Services	2.38%	1,965	-	(1,965)	(47)
29	346 Meters	4.55%	-	-	-	-
30	348 Hydrants	1.82%	4,422	-	(4,422)	(80)
31	Subtotal Trans. & Dist.		\$ 156,055	\$ 139,361	\$ (16,694)	\$ (312)
32	General Plant					
33	389 General Plant Land	0.00%	-	-	-	-
34	390 General Plant Structures	2.50%	-	-	-	-
35	390.1 Leasehold Improvements	n/a	-	-	-	-
36	391 Office Furniture & Equipment	6.67%	-	-	-	-
37	393 Warehouse Equipment	5.00%	-	-	-	-
38	394 Tools, Shop & Garage Equip.	4.00%	-	-	-	-
39	395 Laboratory Equipment	5.00%	-	-	-	-
40	396 Power Operated Equipment	6.67%	-	-	-	-
41	397 Communication Equipment	6.67%	-	-	-	-
42	398 Miscellaneous Equipment	3.33%	-	-	-	-
43	Subtotal General Plant		\$ -	\$ -	\$ -	\$ -
44	Total Utility Plant		\$ 156,055	\$ 139,361	\$ (16,694)	\$ (312)
45						
46	Accumulated Depreciation (1/2-Year Convention)					\$ (156)
47						
48	Net Plant					\$ (16,538)
49						
50						
51						
52						
53						
54						
55						

<sup>1</sup>Updated costs provided in response to Staff data request JMM 2.22/RUCO data request 1.30.

## ARIZONA WATER COMPANY

Test Year Ended December 31, 2010

Rebuttal Rate Base Adjustment RB-3 (Continued)

Accept RUCO Rate Base Adjustment No. 1 - True-up Post-Test Year Plant to Reflect Actual Costs

Line No.		Cochise (Continued)			
		(A)	(B)	(C)	(D)
		1-4767 As Filed	Work Authorization 1-4767 Actual Cost <sup>1</sup>	1-4767 Increase / (Decrease)	Adjstm't to Depreciation Expense
1	Intangible Plant				
2	301 Organization	0.00%		\$ -	\$ -
3	302 Franchises	n/a		-	-
4	303 Other Intangibles	n/a		-	-
5	Subtotal Intangible Plant	\$ -	\$ -	\$ -	\$ -
6	Source of Supply Plant				
7	310.1 Water Rights	0.00%		-	-
8	310.3 Other Source of Supply Land	0.00%		-	-
9	310.4 Wells - Other	n/a		-	-
10	314 Wells	3.13%		-	-
11	Subtotal Source of Sup. Plant	\$ -	\$ -	\$ -	\$ -
12	Pumping Plant				
13	320 Pumping Plant Land	0.00%		-	-
14	321 Pumping Plant Struct. & Improv.	2.86%		-	-
15	325 Electric Pumping Equipment	5.88%		-	-
16	328 Gas Engine Equipment	4.00%		-	-
17	Subtotal Pumping Plant	\$ -	\$ -	\$ -	\$ -
18	Water Treatment Plant				
19	330 Water Treatment Plant Land	0.00%		-	-
20	331 Water Trtmt. Struct. & Improv.	2.50%		-	-
21	332 Water Treatment Equipment	2.86%		-	-
22	Subtotal Water Trtmt. Plant	\$ -	\$ -	\$ -	\$ -
23	Transmission & Distribution Plant				
24	340 Trans. and Dist. Land	0.00%		-	-
25	342 Storage Tanks	2.00%		-	-
26	343 Trans. & Dist. Mains	1.79%	290,283	9,993	179
27	344 Fire Sprinkler Taps	2.00%		-	-
28	345 Services	2.38%	84,294	(81,477)	(1,939)
29	346 Meters	4.55%		-	-
30	348 Hydrants	1.82%	11,136	(11,136)	(203)
31	Subtotal Trans. & Dist. General Plant	\$ 375,720	\$ 293,100	\$ (82,620)	\$ (1,963)
32	General Plant				
33	389 General Plant Land	0.00%		-	-
34	390 General Plant Structures	2.50%		-	-
35	390.1 Leasehold Improvements	n/a		-	-
36	391 Office Furniture & Equipment	6.67%		-	-
37	393 Warehouse Equipment	5.00%		-	-
38	394 Tools, Shop & Garage Equip.	4.00%		-	-
39	395 Laboratory Equipment	5.00%		-	-
40	396 Power Operated Equipment	6.67%		-	-
41	397 Communication Equipment	6.67%		-	-
42	398 Miscellaneous Equipment	3.33%		-	-
43	Subtotal General Plant	\$ -	\$ -	\$ -	\$ -
44	Total Utility Plant	\$ 375,720	\$ 293,100	\$ (82,620)	\$ (1,963)
45	Accumulated Depreciation (1/2-Year Convention)				\$ (961)
46	Net Plant				\$ (81,639)

<sup>1</sup>Updated costs provided in response to Staff data request JMM 2.22/RUCO data request 1.30.

Supporting Schedules:

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Recap Schedules:



ARIZONA WATER COMPANY  
Test Year Ended December 31, 2010  
Rebuttal Rate Base Adjustment RB-3 (Continued)  
Accept RUCO Rate Base Adjustment No. 1 - True-up Post-Test Year Plant to Reflect Actual Costs

Line No.		Cochise (Continued)			
		(A)	(B)	(C)	(D)
		1-4795 As Filed	Work Authorization 1-4795 Actual Cost <sup>1</sup>	1-4795 Increase / (Decrease)	Adjstmt' to Depreciation Expense
1	Intangible Plant				
2	301 Organization	0.00%		\$ -	\$ -
3	302 Franchises	n/a		-	-
4	303 Other Intangibles	n/a		-	-
5	Subtotal Intangible Plant	\$ -	\$ -	\$ -	\$ -
6	Source of Supply Plant				
7	310.1 Water Rights	0.00%		-	-
8	310.3 Other Source of Supply Land	0.00%		-	-
9	310.4 Wells - Other	n/a		-	-
10	314 Wells	3.13%		-	-
11	Subtotal Source of Sup. Plant	\$ -	\$ -	\$ -	\$ -
12	Pumping Plant				
13	320 Pumping Plant Land	0.00%		-	-
14	321 Pumping Plant Struct. & Improv.	2.86%		-	-
15	325 Electric Pumping Equipment	5.88%		-	-
16	328 Gas Engine Equipment	4.00%		-	-
17	Subtotal Pumping Plant	\$ -	\$ -	\$ -	\$ -
18	Water Treatment Plant				
19	330 Water Treatment Plant Land	0.00%		-	-
20	331 Water Trtmt. Struct. & Improv.	2.50%		-	-
21	332 Water Treatment Equipment	2.86%		-	-
22	Subtotal Water Trtmt. Plant	\$ -	\$ -	\$ -	\$ -
23	Transmission & Distribution Plant				
24	340 Trans. and Dist. Land	0.00%		-	-
25	342 Storage Tanks	2.00%		-	-
26	343 Trans. & Dist. Mains	1.79%	122,063	(23,538)	(421)
27	344 Fire Sprinkler Taps	2.00%		-	-
28	345 Services	2.38%	47,721	175	4
29	346 Meters	4.55%		-	-
30	348 Hydrants	1.82%		-	-
31	Subtotal Trans. & Dist.	\$ 193,147	\$ 169,784	\$ (23,363)	\$ (417)
32	General Plant				
33	389 General Plant Land	0.00%		-	-
34	390 General Plant Structures	2.50%		-	-
35	390.1 Leasehold Improvements	n/a		-	-
36	391 Office Furniture & Equipment	6.67%		-	-
37	393 Warehouse Equipment	5.00%		-	-
38	394 Tools, Shop & Garage Equip.	4.00%		-	-
39	395 Laboratory Equipment	5.00%		-	-
40	396 Power Operated Equipment	6.67%		-	-
41	397 Communication Equipment	6.67%		-	-
42	398 Miscellaneous Equipment	3.33%		-	-
43	Subtotal General Plant	\$ -	\$ -	\$ -	\$ -
44	Total Utility Plant	\$ 193,147	\$ 169,784	\$ (23,363)	\$ (417)
45					
46	Accumulated Depreciation (1/2-Year Convention)				\$ (209)
47					
48	Net Plant				\$ (23,154)
49					
50					
51					
52					
53					
54					
55					

<sup>1</sup>Updated costs provided in response to Staff data request JMM 2.22/RUCO data request 1.30.

		Cochise - Total				
		(A)	(B)		(C)	(D)
		Total	Work Authorization	Total	Total	Adjstm't to
		Filed	Actual	Cost <sup>1</sup>	Increase /	Depreciation
Depreciation		Rate			(Decrease)	Expense
Line	No.					
1						
		0.00%	\$	-	\$	-
	301	n/a	-	-	-	-
	302	n/a	-	-	-	-
	303					
			\$	-	\$	-

<sup>1</sup>Updated costs provided in response to Staff data request JMM 2.22/RUCO data request 1.30.

**ARIZONA WATER COMPANY**

Test Year Ended December 31, 2010

Rebuttal Rate Base Adjustment RB-3 (Continued)

Accept RUCO Rate Base Adjustment No. 1 - True-up Post-Test Year Plant to Reflect Actual Costs

Schedule B-2 Rebuttal Appendix  
Page 17 of 23  
Witness: Reiker

Line No.		Depreciation Rate	Oracle			Adjustmt to Depreciation Expense
			[A] 1-4798 As Filed	[B] Work Authorization 1-4798 Actual Cost <sup>1</sup>	[C] 1-4798 Increase / (Decrease)	
1	Intangible Plant					
2	301 Organization	0.00%				
3	302 Franchises	n/a				\$ -
4	303 Other Intangibles	n/a				
5	Subtotal Intangible Plant		\$ -	\$ -	\$ -	\$ -
6	Source of Supply Plant					
7	310.1 Water Rights	0.00%				
8	310.3 Other Source of Supply Land	0.00%				
9	310.4 Wells - Other	n/a				
10	314 Wells	3.13%				
11	Subtotal Source of Sup. Plant		\$ -	\$ -	\$ -	\$ -
12	Pumping Plant					
13	320 Pumping Plant Land	0.00%				
14	321 Pumping Plant Struct. & Improv.	2.86%				
15	325 Electric Pumping Equipment	5.86%				
16	328 Gas Engine Equipment	4.00%				
17	Subtotal Pumping Plant		\$ -	\$ -	\$ -	\$ -
18	Water Treatment Plant					
19	330 Water Treatment Plant Land	0.00%				
20	331 Water Trtmt. Struct. & Improv.	2.50%				
21	332 Water Treatment Equipment	2.86%				
22	Subtotal Water Trtmt. Plant		\$ -	\$ -	\$ -	\$ -
23	Transmission & Distribution Plant					
24	340 Trans. and Dist. Land	0.00%				
25	342 Storage Tanks	2.00%				
26	343 Trans. & Dist. Mains	1.79%	36,286	44,369	8,083	145
27	344 Fire Sprinkler Taps	2.00%				
28	345 Services	2.38%	3,827		(3,827)	(91)
29	346 Meters	4.55%				
30	348 Hydrants	1.82%				
31	Subtotal Trans. & Dist.		\$ 40,113	\$ 44,369	\$ 4,256	\$ 54
32	General Plant					
33	389 General Plant Land	0.00%				
34	390 General Plant Structures	2.50%				
35	390.1 Leasehold Improvements	n/a				
36	391 Office Furniture & Equipment	6.67%				
37	393 Warehouse Equipment	5.00%				
38	394 Tools, Shop & Garage Equip.	4.00%				
39	395 Laboratory Equipment	5.00%				
40	396 Power Operated Equipment	6.67%				
41	397 Communication Equipment	6.67%				
42	398 Miscellaneous Equipment	3.33%				
43	Subtotal General Plant		\$ -	\$ -	\$ -	\$ -
44	Total Utility Plant		\$ 40,113	\$ 44,369	\$ 4,256	\$ 54
45	Accumulated Depreciation (1/2-Year Convention)					
46						
47						
48	Net Plant					\$ 27
49						
50						
51						
52						
53						
54						
55						\$ 4,229

<sup>1</sup>Updated costs provided in response to Staff data request JMM 2.22/RUCO data request 1.30.

Supporting Schedules:

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Recap Schedules:

Line No.		Oracle (Continued)				Adjstm't to Depreciation Expense
		(A)	(B)	(C)	(D)	
		1-4799 As Filed	Work Authorization 1-4799 Actual Cost <sup>1</sup>	1-4799 Increase / (Decrease)		
1	Intangible Plant					
2	301 Organization	0.00%		\$ -		\$ -
3	302 Franchises	n/a		-		-
4	303 Other Intangibles	n/a		-		-
5	Subtotal Intangible Plant		\$ -	\$ -		\$ -
6	Source of Supply Plant					
7	310.1 Water Rights	0.00%		-		-
8	310.3 Other Source of Supply Land	0.00%		-		-
9	310.4 Wells - Other	n/a		-		-
10	314 Wells	3.13%		-		-
11	Subtotal Source of Sup. Plant		\$ -	\$ -		\$ -
12	Pumping Plant					
13	320 Pumping Plant Land	0.00%		-		-
14	321 Pumping Plant Struct. & Improv.	2.86%		-		-
15	325 Electric Pumping Equipment	5.88%		-		-
16	328 Gas Engine Equipment	4.00%		-		-
17	Subtotal Pumping Plant		\$ -	\$ -		\$ -
18	Water Treatment Plant					
19	330 Water Treatment Plant Land	0.00%		-		-
20	331 Water Trtmt. Struct. & Improv.	2.50%		-		-
21	332 Water Treatment Equipment	2.86%		-		-
22	Subtotal Water Trtmt. Plant		\$ -	\$ -		\$ -
23	Transmission & Distribution Plant					
24	340 Trans. and Dist. Land	0.00%		-		-
25	342 Storage Tanks	2.00%		-		-
26	343 Trans. & Dist. Mains	1.79%	39,470	72,145	32,675	585
27	344 Fire Sprinkler Taps	2.00%		-	-	-
28	345 Services	2.38%	11,748	28	(11,720)	(279)
29	346 Meters	4.55%		-	-	-
30	348 Hydrants	1.82%		-	-	-
31	Subtotal Trans. & Dist.		\$ 51,218	\$ 72,174	\$ 20,956	\$ 306
32	General Plant					
33	389 General Plant Land	0.00%		-	-	-
34	390 General Plant Structures	2.50%		-	-	-
35	390.1 Leasehold Improvements	n/a		-	-	-
36	391 Office Furniture & Equipment	6.67%		-	-	-
37	393 Warehouse Equipment	5.00%		-	-	-
38	394 Tools, Shop & Garage Equip.	4.00%		-	-	-
39	395 Laboratory Equipment	5.00%		-	-	-
40	396 Power Operated Equipment	6.67%		-	-	-
41	397 Communication Equipment	6.67%		-	-	-
42	398 Miscellaneous Equipment	3.33%		-	-	-
43	Subtotal General Plant		\$ -	\$ -	\$ -	\$ -
44	Total Utility Plant		\$ 51,218	\$ 72,174	\$ 20,956	\$ 306
45						
46	Accumulated Depreciation (1/2-Year Convention)					
47						\$ 153
48	Net Plant					\$ 20,803
49						
50						
51						
52						
53						
54						
55						

<sup>1</sup> Updated costs provided in response to Staff data request JMM 2.22/RUCO data request 1.30.

## ARIZONA WATER COMPANY

Test Year Ended December 31, 2010

Rebuttal Rate Base Adjustment RB-3 (Continued)

Accept RUCO Rate Base Adjustment No. 1 - True-up Post-Test Year Plant to Reflect Actual Costs

Line No.		Oracle (Continued)				Adjstm't to Depreciation Expense
		(A)	(B)	(C)	(D)	
		1-4800 As Filed	Work Authorization 1-4800 Actual Cost <sup>1</sup>	1-4800 Increase / (Decrease)		
1	Intangible Plant					
2	301 Organization	0.00%		\$ -		\$ -
3	302 Franchises	n/a		-		-
4	303 Other Intangibles	n/a		-		-
5	Subtotal Intangible Plant		\$ -	\$ -		\$ -
6	Source of Supply Plant					
7	310.1 Water Rights	0.00%		-		-
8	310.3 Other Source of Supply Land	0.00%		-		-
9	310.4 Wells - Other	n/a		-		-
10	314 Wells	3.13%		-		-
11	Subtotal Source of Sup. Plant		\$ -	\$ -		\$ -
12	Pumping Plant					
13	320 Pumping Plant Land	0.00%		-		-
14	321 Pumping Plant Struct. & Improv.	2.86%		-		-
15	325 Electric Pumping Equipment	5.88%		-		-
16	328 Gas Engine Equipment	4.00%		-		-
17	Subtotal Pumping Plant		\$ -	\$ -		\$ -
18	Water Treatment Plant					
19	330 Water Treatment Plant Land	0.00%		-		-
20	331 Water Trtmt. Struct. & Improv.	2.50%		-		-
21	332 Water Treatment Equipment	2.86%		-		-
22	Subtotal Water Trtmt. Plant		\$ -	\$ -		\$ -
23	Transmission & Distribution Plant					
24	340 Trans. and Dist. Land	0.00%		-		-
25	342 Storage Tanks	2.00%		-		-
26	343 Trans. & Dist. Mains	1.79%	68,202	92,338	24,136	432
27	344 Fire Sprinkler Taps	2.00%		-		-
28	345 Services	2.38%	19,651		(19,651)	(468)
29	346 Meters	4.55%		-		-
30	348 Hydrants	1.82%		-		-
31	Subtotal Trans. & Dist.		\$ 87,853	\$ 92,338	\$ 4,485	\$ (36)
32	General Plant					
33	389 General Plant Land	0.00%		-		-
34	390 General Plant Structures	2.50%		-		-
35	390.1 Leasehold Improvements	n/a		-		-
36	391 Office Furniture & Equipment	6.67%		-		-
37	393 Warehouse Equipment	5.00%		-		-
38	394 Tools, Shop & Garage Equip.	4.00%		-		-
39	395 Laboratory Equipment	5.00%		-		-
40	396 Power Operated Equipment	6.67%		-		-
41	397 Communication Equipment	6.67%		-		-
42	398 Miscellaneous Equipment	3.33%		-		-
43	Subtotal General Plant		\$ -	\$ -		\$ -
44	Total Utility Plant		\$ 87,853	\$ 92,338	\$ 4,485	\$ (36)
45	Accumulated Depreciation (1/2-Year Convention)					
46						
47	Net Plant					
48						
49						
50						
51						
52						
53						
54						
55						

<sup>1</sup>Updated costs provided in response to Staff data request JMM 2.22/RUCO data request 1.30.

Supporting Schedules:

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Recap Schedules:

## ARIZONA WATER COMPANY

Test Year Ended December 31, 2010

Rebuttal Rate Base Adjustment R8-3 (Continued)

Accept RUCO Rate Base Adjustment No. 1 - True-up Post-Test Year Plant to Reflect Actual Costs

Exhibit  
Schedule B-2 Rebuttal Appendix  
Page 20 of 23  
Witness: Reiker

		Oracle - Total				
		[A]	[B]	[C]	[D]	
		Total	Work Authorization	Total	Total	
		As Filed	Actual Cost <sup>1</sup>	Increase / (Decrease)	Adjustmt' to Depreciation Expense	
Line No.		Depreciation Rate				
1	Intangible Plant					
2	301 Organization	0.00%	\$ -	\$ -	\$ -	
3	302 Franchises	n/a	-	-	-	
4	303 Other Intangibles	n/a	-	-	-	
5	Subtotal Intangible Plant		\$ -	\$ -	\$ -	
6	Source of Supply Plant					
7	310.1 Water Rights	0.00%	-	-	-	
8	310.3 Other Source of Supply Land	0.00%	-	-	-	
9	310.4 Wells - Other	n/a	-	-	-	
10	314 Wells	3.13%	-	-	-	
11	Subtotal Source of Sup. Plant		\$ -	\$ -	\$ -	
12	Pumping Plant					
13	320 Pumping Plant Land	0.00%	-	-	-	
14	321 Pumping Plant Struct. & Improv.	2.86%	-	-	-	
15	325 Electric Pumping Equipment	5.88%	-	-	-	
16	328 Gas Engine Equipment	4.00%	-	-	-	
17	Subtotal Pumping Plant		\$ -	\$ -	\$ -	
18	Water Treatment Plant					
19	330 Water Treatment Plant Land	0.00%	-	-	-	
20	331 Water Trtmt. Struct. & Improv.	2.50%	-	-	-	
21	332 Water Treatment Equipment	2.86%	-	-	-	
22	Subtotal Water Trtmt. Plant		\$ -	\$ -	\$ -	
23	Transmission & Distribution Plant					
24	340 Trans. and Dist. Land	0.00%	-	-	-	
25	342 Storage Tanks	2.00%	-	-	-	
26	343 Trans. & Dist. Mains	1.79%	143,958	208,853	64,895	
27	344 Fire Sprinkler Taps	2.00%	-	-	-	
28	345 Services	2.38%	35,226	28	(35,198)	
29	346 Meters	4.55%	-	-	-	
30	348 Hydrants	1.82%	-	-	-	
31	Subtotal Trans. & Dist.		\$ 179,184	\$ 208,881	\$ 29,697	
32	General Plant					
33	389 General Plant Land	0.00%	-	-	-	
34	390 General Plant Structures	2.50%	-	-	-	
35	390.1 Leasehold Improvements	n/a	-	-	-	
36	391 Office Furniture & Equipment	6.67%	-	-	-	
37	393 Warehouse Equipment	5.00%	-	-	-	
38	394 Tools, Shop & Garage Equip.	4.00%	-	-	-	
39	395 Laboratory Equipment	5.00%	-	-	-	
40	396 Power Operated Equipment	6.67%	-	-	-	
41	397 Communication Equipment	6.67%	-	-	-	
42	398 Miscellaneous Equipment	3.33%	-	-	-	
43	Subtotal General Plant		\$ -	\$ -	\$ -	
44	Total Utility Plant		\$ 179,184	\$ 208,881	\$ 29,697	
45	Accumulated Depreciation (1/2-Year Convention)					
46						
47	Net Plant					
48						
49						
50						

<sup>1</sup>Updated costs provided in response to Staff data request JMM 2.22/RUCO data request 1.30.

Supporting Schedules:

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Recap Schedules:

ARIZONA WATER COMPANY

Test Year Ended December 31, 2010

Rebuttal Rate Base Adjustment RB-3 (Continued)

Accept RUCO Rate Base Adjustment No. 1 - True-up Post-Test Year Plant to Reflect Actual Costs

Schedule B-2 Rebuttal Appendix  
Page 21 of 23  
Witness: Reiker

		Phoenix Office			
Line No.		Depreciation Rate	[A]		[D]
			1-4823 As Filed	Work Authorization 1-4823 Actual Cost <sup>1</sup>	
1	Intangible Plant				
2	301 Organization	0.00%		\$ -	\$ -
3	302 Franchises	n/a		-	-
4	303 Other Intangibles	n/a		-	-
5	Subtotal Intangible Plant		\$ -	\$ -	\$ -
6	Source of Supply Plant				
7	310.1 Water Rights	0.00%		-	-
8	310.3 Other Source of Supply Land	0.00%		-	-
9	310.4 Wells - Other	n/a		-	-
10	314 Wells	3.13%		-	-
11	Subtotal Source of Sup. Plant		\$ -	\$ -	\$ -
12	Pumping Plant				
13	320 Pumping Plant Land	0.00%		-	-
14	321 Pumping Plant Struct. & Improv.	2.86%		-	-
15	325 Electric Pumping Equipment	5.88%		-	-
16	328 Gas Engine Equipment	4.00%		-	-
17	Subtotal Pumping Plant		\$ -	\$ -	\$ -
18	Water Treatment Plant				
19	330 Water Treatment Plant Land	0.00%		-	-
20	331 Water Trtmt. Struct. & Improv.	2.50%		-	-
21	332 Water Treatment Equipment	2.86%		-	-
22	Subtotal Water Trtmt. Plant		\$ -	\$ -	\$ -
23	Transmission & Distribution Plant				
24	340 Trans. and Dist. Land	0.00%		-	-
25	342 Storage Tanks	2.00%		-	-
26	343 Trans. & Dist. Mains	1.79%		-	-
27	344 Fire Sprinkler Taps	2.00%		-	-
28	345 Services	2.38%		-	-
29	346 Meters	4.55%		-	-
30	348 Hydrants	1.82%		-	-
31	Subtotal Trans. & Dist.		\$ -	\$ -	\$ -
32	General Plant				
33	389 General Plant Land	0.00%		-	-
34	390 General Plant Structures	2.50%		-	-
35	390.1 Leasehold Improvements	n/a		-	-
36	391 Office Furniture & Equipment	6.67%		-	-
37	393 Warehouse Equipment	5.00%		-	-
38	394 Tools, Shop & Garage Equip.	4.00%	25,564	(25,564)	(1,023)
39	395 Laboratory Equipment	5.00%		-	-
40	396 Power Operated Equipment	6.67%		-	-
41	397 Communication Equipment	6.67%		-	-
42	398 Miscellaneous Equipment	3.33%		-	-
43	Subtotal General Plant		\$ 25,564	\$ 31,727	\$ 2,116
44	Total Utility Plant		\$ 25,564	\$ 31,727	\$ 1,094
45			\$ 25,564	\$ 31,727	\$ 1,094
46	Accumulated Depreciation (1/2-Year Convention)				
47					
48					
49	Net Plant				\$ 547
50					
51					
52					
53					
54					
55					\$ 5,617

<sup>1</sup>Updated costs provided in response to Staff data request JMM 2.22/RUCO data request 1.30.

Supporting Schedules:

N:\2011\_Rate\_Case\Schedules\Eastern Group\2011 AWC Rate Case Model REBUTTAL SCHEDULES AWC EG 03.30.12 900am.xlsx\B2.1 Processing Date: 3/30/2012 11:09 AM

Recap Schedules:

Line No.	System	Company Working Cash - As Filled	Company Working Cash - Rebuttal	Increase / (Decrease)
1				
2	Eastern Group			
3	Superstition	\$ 173,185	\$ 112,550	\$ (60,634)
4	Cochise	54,157	51,282	(2,875)
5	San Manuel	10,997	8,906	(2,091)
6	Oracle	14,197	12,198	(1,999)
7	SaddleBrooke Ranch	209	(574)	(783)
8	Winkelman	(165)	(648)	(483)
9				
10	Subtotal	\$ 252,578	\$ 183,714	\$ (68,864)
11				
12	Total	\$ 252,578	\$ 183,714	\$ (68,864)
13				
14				
15	Increase/(Decrease) in Working Cash			\$ (68,864)
16				
17				
18				
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21				
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Line No.	Test Year Adjusted	Eastern Group					Winkelman
		[A]	[B]	[C]	[D]	[E]	
					Allocated		
1							
2							
3	3-Factor Allocation Ratio		Superstition	Cochise	San Manuel	Oracle	SaddleBrooke Ranch
4			0.2865	0.0719	0.0164	0.0204	0.0015
5	Phoenix Office						
6	Plant Classification						
7	Intangible Plant	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8	Source of Supply Plant	-	-	-	-	-	-
9	Pumping Plant	-	-	-	-	-	-
10	Water Treatment Plant	-	-	-	-	-	-
11	Transmission & Distribution Plant	-	-	-	-	-	-
12	General Plant	-	-	-	-	-	-
13	Total Gross Plant in Service	\$ 6,163	\$ 1,766	\$ 443	\$ 101	\$ 126	\$ 9
14	Less:						
15	Accumulated Depreciation	\$ 547	\$ 157	\$ 39	\$ 9	\$ 11	\$ 1
16	Net Plant in Service	\$ 5,617	\$ 1,609	\$ 404	\$ 92	\$ 115	\$ 8
17	Less:						
18	Deferred Income Tax	-	-	-	-	-	-
19	Total Rate Base	\$ 5,617	\$ 1,609	\$ 404	\$ 92	\$ 115	\$ 8
20							
21							
22	Meter Shop						
23	Plant Classification						
24	Intangible Plant	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
25	Source of Supply Plant	-	-	-	-	-	-
26	Pumping Plant	-	-	-	-	-	-
27	Water Treatment Plant	-	-	-	-	-	-
28	Transmission & Distribution Plant	-	-	-	-	-	-
29	General Plant	-	-	-	-	-	-
30	Total Gross Plant in Service	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
31	Less:						
32	Accumulated Depreciation	-	-	-	-	-	-
33	Net Plant in Service	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
34	Less:						
35	Deferred Income Tax	-	-	-	-	-	-
36	Total Rate Base	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
37							
38	Total Phoenix Office & Meter Shop						
39	Plant Classification						
40	Intangible Plant	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
41	Source of Supply Plant	-	-	-	-	-	-
42	Pumping Plant	-	-	-	-	-	-
43	Water Treatment Plant	-	-	-	-	-	-
44	Transmission & Distribution Plant	-	-	-	-	-	-
45	General Plant	-	-	-	-	-	-
46	Total Gross Plant in Service	\$ 6,163	\$ 1,766	\$ 443	\$ 101	\$ 126	\$ 9
47	Less:						
48	Accumulated Depreciation	\$ 547	\$ 157	\$ 39	\$ 9	\$ 11	\$ 1
49	Net Plant in Service	\$ 5,617	\$ 1,609	\$ 404	\$ 92	\$ 115	\$ 8
50	Less:						
51	Deferred Income Tax	-	-	-	-	-	-
52	Total Rate Base	\$ 5,617	\$ 1,609	\$ 404	\$ 92	\$ 115	\$ 8
53							
54							
55							

Eastern Group			
Line No.	[A] Company - As Filed Working Capital	[B] Rebuttal Adjustments	[C] Company - Rebuttal Working Capital
1			
2			
3			
4	Working Cash Requirement (Sch. B-5 Appendix)	(68,864) \$	183,714
5			
6	Material and Supplies Inventories <sup>1</sup>	-	125,862
7			
8	Required Bank Balances <sup>1</sup>	-	868,875
9			
10	Prepayments & Special Deposits <sup>1</sup>	-	266,716
11			
12	Total Working Capital Allowance	(68,864) \$	1,445,166
13			
14			
15			
16			
17			
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55	<sup>1</sup> 13-month average balances		

Line No.	Superstition (Apache Junction, Superior, Miami)		
	[A] Company - As Filed Working Capital	[B] Rebuttal Adjustments	[C] Company - Rebuttal Working Capital
1			
2			
3			
4	Working Cash Requirement (Sch. B-5 Appendix)	173,185 \$	(60,634) \$
5			112,550
6	Material and Supplies Inventories <sup>1</sup>	29,196	-
7			29,196
8	Required Bank Balances <sup>1</sup>	624,196	-
9			624,196
10	Prepayments & Special Deposits <sup>1</sup>	190,114	-
11			190,114
12	Total Working Capital Allowance	1,016,691 \$	(60,634) \$
13			956,056
14			
15			
16			
17			
18			
19			
20			
21			
22			
23			
24			
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55	<sup>1</sup> 13-month average balances		

Line No.	Cochise (Bisbee, Sierra Vista)		
	[A] Company - As Filed Working Capital	[B] Rebuttal Adjustments	[C] Company - Rebuttal Working Capital
1			
2			
3			
4	Working Cash Requirement (Sch. B-5 Appendix)		
5			
6	Material and Supplies Inventories <sup>1</sup>		
7			
8	Required Bank Balances <sup>1</sup>		
9			
10	Prepayments & Special Deposits <sup>1</sup>		
11			
12	Total Working Capital Allowance		
13			
14			
15			
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55	<sup>1</sup> 13-month average balances		

13-month average balances

Line No.		(A) Company - As Filed Working Capital	(B) Rebuttal Adjustments	(C) Company - Rebuttal Working Capital
1				
2	Working Cash Requirement			
3	(Sch. B-5 Appendix)			
4		\$ 14,197	\$ (1,999)	\$ 12,198
5	Material and Supplies Inventories <sup>1</sup>			
6		1,380	-	1,380
7	Required Bank Balances <sup>1</sup>			
8		44,254	-	44,254
9	Prepayments & Special Deposits <sup>1</sup>			
10		13,505	-	13,505
11	Total Working Capital Allowance	\$ 73,335	\$ (1,999)	\$ 71,337

13-month average balances

13-month average balances

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**Recap Schedules:**  
**B-1 Rebuttal**

55 <sup>1</sup>13-month average balances

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Superstition (Apache Junction, Superior, Miami)

Line No.	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]	[K]	[L]
	Adjusted Results - As Filed	Revenue Lag Days <sup>1</sup>	Expense Lag Days <sup>2</sup>	Net Lag Days [B - C]	Lead / Lag Factor [D - 365]	Working Cash Requirement [A X E]	Adjusted Results - Rebuttal	Revenue Lag Days <sup>1</sup>	Expense Lag Days <sup>2</sup>	Net Lag Days [H - I]	Lead / Lag Factor [J - 365]	Working Cash Requirement [G X K]
1	\$ 1,424,839	29.53	30.87	(1.34)	(0.0037)	\$ (5,223)	\$ 1,425,047	29.53	30.87	(1.34)	(0.0037)	\$ (5,224)
2	2,662,431	29.53	14.00	15.53	0.0426	113,296	2,662,431	29.53	14.00	15.53	0.0426	113,296
3	691,466	29.53	(40.09)	69.62	0.1907	131,894	691,466	29.53	(40.09)	69.62	0.1907	131,894
4	130,705	29.53	(18.11)	47.64	0.1305	17,060	130,705	29.53	(18.11)	47.64	0.1305	17,060
5	158,734	29.53	(45.27)	74.80	0.2049	32,530	158,734	29.53	(45.27)	74.80	0.2049	32,530
6	36,305	29.53	(46.50)	76.03	0.2083	7,563	36,305	29.53	(46.50)	76.03	0.2083	7,563
7	481,608	29.53	(8.92)	38.45	0.1053	50,736	481,608	29.53	(8.92)	38.45	0.1053	50,736
8	2,255,527	29.53	(9.27)	38.80	0.1063	239,778	2,199,050	29.53	(9.27)	38.80	0.1063	233,774
9	1,660,023	29.53	37.00	(7.47)	(0.0205)	(33,965)	1,655,343	29.53	37.00	(7.47)	(0.0205)	(33,869)
10	365,688	29.53	37.00	(7.47)	(0.0205)	(7,482)	364,657	29.53	37.00	(7.47)	(0.0205)	(7,461)
11	199,553	29.53	14.00	15.53	0.0426	8,492	199,553	29.53	14.00	15.53	0.0426	8,492
12	6,196	29.53	83.10	(53.57)	(0.1468)	(909)	6,196	29.53	83.10	(53.57)	(0.1468)	(909)
13	811,695	29.53	212.00	(182.47)	(0.4999)	(405,776)	921,351	29.53	212.00	(182.47)	(0.4999)	(460,595)
14	153,893	29.53	(98.83)	128.36	0.3517	54,120	153,893	29.53	(98.83)	128.36	0.3517	54,120
15	246,884	29.53	34.72	(5.19)	(0.0142)	(3,509)	246,884	29.53	34.72	(5.19)	(0.0142)	(3,509)
16												
17												
18												
19												
20												
21	\$ 11,285,548					\$ 198,605	\$ 11,333,224					\$ 137,899
22												
23												
24	Interest Expense											
25	Cost of Equity	1,692,249	29.53	(61.72)	(0.16909)	(286,143)	1,687,478	29.53	91.25	(61.72)	(0.16909)	(285,336)
26		3,222,397	29.53	29.53	0.08091	260,723	3,213,313	29.53	-	29.53	0.08091	259,988
27	Subtotal	\$ 4,914,647				\$ (25,420)	\$ 4,900,792					\$ (25,349)
28												
29												
30	Total	16,200,195				\$ 173,185	16,234,015					\$ 112,550
31												
32												
33												
34												
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<sup>1</sup>2010 Actual lag days per AWC billing system.  
<sup>2</sup>Dec. No. 64282 as amended by Dec. Nos. 66849 & 66302. Purchased power and purchased water lag days per Dec. No. 71845.

<sup>1</sup>2010 Actual lag days per AWC billing system.  
<sup>2</sup>Dec. No. 64282 as amended by Dec. Nos. 66849 & 68302. Purchased power and purchased water lag days per Dec. No. 71845.

San Manuel												
Line No.	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]	[K]	[L]
	Adjusted Results - As Filed	Revenue Lag Days <sup>1</sup>	Expense Lag Days <sup>2</sup>	Net Lag Days [B - C]	Lead / Lag Factor [D ÷ 365]	Working Cash Requirement [A X E]	Adjusted Results - Rebuttal	Revenue Lag Days <sup>1</sup>	Expense Lag Days <sup>2</sup>	Net Lag Days [H - I]	Lead / Lag Factor [J ÷ 365]	Working Cash Requirement [G X K]
	\$	34,056	30.15	30.87	(0.72)	\$ (67)	\$	34,138	30.15	30.87	(0.0020)	\$ (67)
1	218,739	30.15	14.00	16.15	0.0443	9,680	218,739	30.15	14.00	16.15	0.0443	9,680
2	372,967	30.15	26.04	4.11	0.0113	4,202	290,603	30.15	26.04	4.11	0.0113	3,274
3	3,034	30.15	(18.11)	48.26	0.1322	401	3,034	30.15	(18.11)	48.26	0.1322	401
4	9,086	30.15	(45.27)	75.42	0.2066	1,878	9,086	30.15	(45.27)	75.42	0.2066	1,878
5	2,078	30.15	(46.50)	76.65	0.2100	436	2,078	30.15	(46.50)	76.65	0.2100	436
6	33,958	30.15	(8.92)	39.07	0.1070	3,635	33,958	30.15	(8.92)	39.07	0.1070	3,635
7	153,827	30.15	(9.27)	39.42	0.1080	16,614	140,510	30.15	(9.27)	39.42	0.1080	15,176
8	66,196	30.15	37.00	(6.85)	(0.0188)	(1,242)	66,131	30.15	37.00	(6.85)	(0.0188)	(1,241)
9	14,582	30.15	37.00	(6.85)	(0.0188)	(274)	14,568	30.15	37.00	(6.85)	(0.0188)	(273)
10	16,443	30.15	14.00	16.15	0.0443	728	16,443	30.15	14.00	16.15	0.0443	728
11	545	30.15	83.10	(52.95)	(0.1451)	(79)	545	30.15	83.10	(52.95)	(0.1451)	(79)
12	54,539	30.15	212.00	(181.85)	(0.4982)	(27,172)	53,990	30.15	212.00	(181.85)	(0.4982)	(26,899)
13	8,929	30.15	(98.83)	128.98	0.3534	3,155	8,929	30.15	(98.83)	128.98	0.3534	3,155
14	17,408	30.15	34.72	(4.57)	(0.0125)	(218)	17,408	30.15	34.72	(4.57)	(0.0125)	(218)
15												
16												
17												
18												
19												
20												
21	\$ 1,006,389					\$ 11,677	\$ 910,161					\$ 9,566
22												
23												
24												
25	67,481	30.15	91.25	(61.10)	(0.16739)	(11,296)	67,414	30.15	91.25	(61.10)	(0.16739)	(11,285)
26	128,498	30.15	-	30.15	0.08261	10,615	128,371	30.15	-	30.15	0.08261	10,605
27	\$ 195,980					\$ (681)	\$ 195,785					\$ (680)
28												
29												
30	1,202,368					\$ 10,997	1,105,947					\$ 8,906

<sup>1</sup>2010 Actual lag days per AWC billing system.  
<sup>2</sup>Dec. No. 64282 as amended by Dec. Nos. 66849 & 68302. Purchased power and purchased water lag days per Dec. No. 71845.

Line No.		Oracle											
		[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]	[K]	[L]
		Company - As Filed				Company - Rebuttal							
	Adjusted Results - As Filed	Revenue Lag Days <sup>1</sup>	Expense Lag Days <sup>2</sup>	Net Lag Days [B - C]	Lead / Lag Factor [D + 365]	Working Cash Requirement [A X E]	Adjusted Results - Rebuttal	Revenue Lag Days <sup>1</sup>	Expense Lag Days <sup>2</sup>	Net Lag Days [H - I]	Lead / Lag Factor [J + 365]	Working Cash Requirement [G X K]	
1													
2													
3	Operating Expenses	\$ 107,154	30.56	30.87	(0.31)	(0.0008) \$ (91)	\$ 107,256	30.56	30.87	(0.31)	(0.0008) \$ (91)		
4	Purchased Power	195,535	30.56	14.00	16.56	0.0454 8,872	195,535	30.56	14.00	16.56	0.0454 8,872		
5	Payroll	-	30.56	-	30.56	-	-	30.56	-	30.56	-	-	
6	Purchased Water	3,859	30.56	(18.11)	48.67	0.1333 515	3,859	30.56	(18.11)	48.67	0.1333 515		
7	Chemicals	11,303	30.56	(45.27)	75.83	0.2078 2,348	11,303	30.56	(45.27)	75.83	0.2078 2,348		
8	Property & Liability Insurance	2,585	30.56	(46.50)	77.06	0.2111 546	2,585	30.56	(46.50)	77.06	0.2111 546		
9	Workman's Compensation Insurance	34,962	30.56	(8.92)	39.48	0.1082 3,782	34,962	30.56	(8.92)	39.48	0.1082 3,782		
10	Health Insurance	155,084	30.56	(9.27)	39.83	0.1091 16,924	151,793	30.56	(9.27)	39.83	0.1091 16,565		
11	Other O&M (Excluding Rate Case Expense)	81,079	30.56	37.00	(6.44)	(0.0176) (1,430)	81,992	30.56	37.00	(6.44)	(0.0176) (1,446)		
12	Federal Income Taxes	17,861	30.56	37.00	(6.44)	(0.0176) (1,430)	18,062	30.56	37.00	(6.44)	(0.0176) (1,446)		
13	State Income Taxes	14,659	30.56	14.00	16.56	0.0454 665	14,659	30.56	14.00	16.56	0.0454 665		
14	FICA Taxes	479	30.56	83.10	(52.54)	(0.1439) (69)	479	30.56	83.10	(52.54)	(0.1439) (69)		
15	FUTA & SUTA Taxes	41,491	30.56	212.00	(181.44)	(0.4971) (20,625)	44,735	30.56	212.00	(181.44)	(0.4971) (22,238)		
16	Property Taxes	11,107	30.56	(98.83)	129.39	0.3545 3,938	11,107	30.56	(98.83)	129.39	0.3545 3,938		
17	Registration, Svc. Contracts, & Misc. Fees	17,922	30.56	34.72	(4.16)	(0.0114) (204)	17,922	30.56	34.72	(4.16)	(0.0114) (204)		
18	Retirement Annuities (401k)												
19													
20													
21	Subtotal	\$ 695,081				\$ 14,854	\$ 696,250				\$ 12,863		
22													
23													
24	Interest Expense	82,653	30.56	91.25	(61.10)	(0.16739) (13,835)	83,584	30.56	91.25	(61.10)	(0.16739) (13,991)		
25	Cost of Equity	157,389	30.56	-	30.56	0.08373 13,178	159,161	30.56	-	30.56	0.08373 13,326		
26													
27	Subtotal	\$ 240,043				\$ (657)	\$ 242,745				\$ (665)		
28													
29													
30	Total	935,123				\$ 14,197	938,995				\$ 12,198		
31													
32													

<sup>1</sup>2010 Actual lag days per AWC billing system.  
<sup>2</sup>Dec. No. 64282 as amended by Dec. Nos. 66849 & 68302. Purchased power and purchased water lag days per Dec. No. 71845.

Supporting Schedules:

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Recap Schedules:  
B-5 Rebuttal

**ARIZONA WATER COMPANY**

Test Year Ended December 31, 2010  
Computation of Working Cash Requirement

Exhibit  
Schedule B-5 Rebuttal Appendix  
Page 5 of 6  
Witness: Reiker

**SaddleBrooke Ranch**

SaddleBrooke Ranch													
Line No.	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]	[K]	[L]	
	Company - As Filed												
	Adjusted Results - As Filed	Revenue Lag Days <sup>1</sup>	Expense Lag Days <sup>2</sup>	Net Lag Days [B - C]	Lead / Lag Factor [D ÷ 365]	Working Cash Requirement [A X E]		Adjusted Results - Rebuttal	Revenue Lag Days <sup>1</sup>	Expense Lag Days <sup>2</sup>	Net Lag Days [H - I]	Lead / Lag Factor [J ÷ 365]	Working Cash Requirement [G X K]
1	\$ 103,754	28.62	30.87	(2.25)	(0.0062)	\$ (641)		\$ 103,754	28.62	30.87	(2.25)	(0.0062)	\$ (641)
2	10,235	28.62	14.00	14.62	0.0400	410		10,235	28.62	14.00	14.62	0.0400	410
3	-	28.62	26.04	2.58	0.0071	-		-	28.62	26.04	2.58	0.0071	-
4	-	28.62	(18.11)	46.73	0.1280	-		-	28.62	(18.11)	46.73	0.1280	-
5	831	28.62	(45.27)	73.89	0.2024	168		831	28.62	(45.27)	73.89	0.2024	168
6	190	28.62	(46.50)	75.12	0.2058	39		190	28.62	(46.50)	75.12	0.2058	39
7	1,338	28.62	(8.92)	37.54	0.1028	138		1,338	28.62	(8.92)	37.54	0.1028	138
8	29,583	28.62	(9.27)	37.89	0.1038	3,071		29,496	28.62	(9.27)	37.89	0.1038	3,062
9	(4,090)	28.62	37.00	(8.38)	(0.0230)	94		(0)	28.62	37.00	(8.38)	(0.0230)	0
10	772	28.62	37.00	(8.38)	(0.0230)	21		(0)	28.62	37.00	(8.38)	(0.0230)	0
11	25	28.62	14.00	14.62	0.0400	31		772	28.62	14.00	14.62	0.0400	31
12	6,935	28.62	83.10	(54.48)	(0.1493)	(4)		25	28.62	83.10	(54.48)	(0.1493)	(4)
13	817	28.62	212.00	(183.38)	(0.5024)	(3,484)		6,908	28.62	212.00	(183.38)	(0.5024)	(3,471)
14	686	28.62	(98.83)	127.45	0.3492	285		817	28.62	(98.83)	127.45	0.3492	285
15		28.62	34.72	(6.10)	(0.0167)	(11)		686	28.62	34.72	(6.10)	(0.0167)	(11)
Subtotal	\$ 150,176				\$	116		\$ 155,052				\$	6
Interest Expense													
Cost of Equity	(4,169)	28.62	91.25	(62.63)	(0.17160)	715		-	28.62	91.25	(62.63)	(0.17160)	-
	(7,939)	28.62	-	28.62	0.07840	(622)		(7,392)	28.62	-	28.62	0.07840	(580)
Subtotal	\$ (12,108)				\$	93		\$ (7,392)			\$		(580)
Total	138,068				\$	209		147,660			\$		(574)

<sup>1</sup>2010 Actual lag days per AWC billing system.  
<sup>2</sup>Dec. No. 64282 as amended by Dec. Nos. 66849 & 68302. Purchased power and purchased water lag days per Dec. No. 71845.

Supporting Schedules:

N:\2011\_Rate\_Cases\Schedules\Eastern Group\2011 AWC Rate Case Model\REBUTTAL SCHEDULES AWC EG 03.30.12 900am.xlsx\B5.1  
Processing Date: 3/30/2012 11:09 AM

Recap Schedules:  
B-5 Rebuttal

Line No.		Winkelman											
		[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]	[K]	[L]
		Adjusted Results - As Filed	Revenue Lag Days <sup>1</sup>	Expense Lag Days <sup>2</sup>	Net Lag Days [B - C]	Lead / Lag Factor [D + 365]	Working Cash Requirement [A X E]	Adjusted Results - Rebuttal	Revenue Lag Days <sup>1</sup>	Expense Lag Days <sup>2</sup>	Net Lag Days [H - I]	Lead / Lag Factor [J + 365]	Working Cash Requirement [G X K]
1		\$	6,781	30.87	(1.19)	(0.0033)	\$ (22)	\$	6,822	30.87	(1.19)	(0.0033)	\$ (22)
2	Operating Expenses	20,662	29.68	14.00	15.68	0.0430	888	20,662	29.68	14.00	15.68	0.0430	888
3	Purchased Power	-	29.68	-	29.68	0.0813	-	-	29.68	-	29.68	0.0813	-
4	Purchased Water	5,807	29.68	(18.11)	47.79	0.1309	760	5,807	29.68	(18.11)	47.79	0.1309	760
5	Chemicals	1,053	29.68	(45.27)	74.95	0.2053	216	1,053	29.68	(45.27)	74.95	0.2053	216
6	Property & Liability Insurance	241	29.68	(46.50)	76.18	0.2087	50	241	29.68	(46.50)	76.18	0.2087	50
7	Workman's Compensation Insurance	3,680	29.68	(8.92)	38.60	0.1058	389	3,680	29.68	(8.92)	38.60	0.1058	389
8	Health Insurance	18,797	29.68	(9.27)	38.95	0.1067	2,006	18,504	29.68	(9.27)	38.95	0.1067	1,975
9	Other O&M (Excluding Rate Case Expense)	10,072	29.68	37.00	(7.32)	(0.0201)	(202)	10,057	29.68	37.00	(7.32)	(0.0201)	(202)
10	Federal Income Taxes	2,219	29.68	14.00	15.68	0.0430	67	2,215	29.68	14.00	15.68	0.0430	67
11	FICA Taxes	1,549	29.68	83.10	(53.42)	(0.1464)	(7)	1,549	29.68	83.10	(53.42)	(0.1464)	(7)
12	FUTA & SUTA Taxes	50	29.68	212.00	(182.32)	(0.4995)	(4,461)	50	29.68	212.00	(182.32)	(0.4995)	(4,914)
13	Property Taxes	8,931	29.68	(98.83)	128.51	0.3521	364	8,937	29.68	(98.83)	128.51	0.3521	364
14	Registration, Svc. Contracts, & Misc. Fees	1,035	29.68	34.72	(5.04)	(0.0138)	(26)	1,035	29.68	34.72	(5.04)	(0.0138)	(26)
15	Retirement Annuities (401k)	1,887	29.68					1,887	29.68				
16	Subtotal	\$ 82,764					\$ (23)	\$ 83,398					\$ (506)
17	Interest Expense												
18	Cost of Equity	10,268	29.68	91.25	(61.57)	(0.16868)	(1,732)	10,252	29.68	91.25	(61.57)	(0.16868)	(1,729)
19		19,552	29.68	-	29.68	0.08132	1,590	19,522	29.68	-	29.68	0.08132	1,587
20	Subtotal	\$ 29,820					\$ (142)	\$ 29,774					\$ (142)
21	Total	112,584					\$ (165)	113,172					\$ (648)

<sup>1</sup>2010 Actual lag days per AWC billing system.  
<sup>2</sup>Dec. No. 64282 as amended by Dec. Nos. 66849 & 68302. Purchased power and purchased water lag days per Dec. No. 71845.

		Eastern Group						
Line No.		[A]	[B]	[C]	[D]	[E]	[F]	[G]
		Test Year Ended 12/31/2010	Pro Forma Adjustments - As Filed	Adjusted Test Year - As Filed	Rebuttal Adjustments	Adjusted Test Year - Rebuttal	Required Increase - Rebuttal	Adjstd' w/ Increase - Rebuttal
1	Operating Revenues							
2	Residential	\$ 16,329,000	\$ (957,656)	\$ 15,371,345	\$ -	\$ 15,371,345		
3	Commercial	4,240,936	(351,035)	3,889,900	-	3,889,900		
4	Industrial	101,432	(24,853)	76,580	-	76,580		
5	Private Fire Service	34,961	33,541	68,502	-	68,502		
6	Other Water Revenues	353,544	(42,723)	310,821	-	310,821		
7	Total Water Revenues	\$ 21,059,873	\$ (1,342,726)	\$ 19,717,147	\$ -	\$ 19,717,147		
8								
9	Miscellaneous	863,935	(64,530)	799,406	-	799,406		
10	Total Operating Revenues	\$ 21,923,809	\$ (1,407,256)	\$ 20,516,553	\$ -	\$ 20,516,553	\$ 5,198,671	\$ 25,715,224
11								
12	Operating Expenses							
13	Source of Supply Expenses:							
14	Purchased Water	865,517	198,916	1,064,433	(82,364)	982,069	-	982,069
15	Other	109,899	8,910	118,809	(986)	117,823	-	117,823
16	Pumping Expenses:							
17	Purchased Power	2,097,543	27,322	2,124,865	3,537	2,128,402	-	2,128,402
18	Purchased Gas	1,606	-	1,606	-	1,606	-	1,606
19	Other	681,527	85,853	767,380	(7,573)	759,807	-	759,807
20	Water Treatment Expenses	725,528	27,284	752,812	(10,732)	742,080	-	742,080
21	Transmission & Distribution Expenses	1,889,939	671,993	2,561,932	(22,578)	2,539,354	-	2,539,354
22	Customer Accounting Expenses	1,671,765	97,095	1,768,860	(18,616)	1,750,244	-	1,750,244
23	Sales Expense	-	-	-	-	-	-	-
24	Administrative & General Expenses	2,600,892	369,013	2,969,905	(27,284)	2,942,621	-	2,942,621
25	Total Operations & Maintenance Expense	\$ 10,644,216	\$ 1,486,386	\$ 12,130,602	\$ (166,596)	\$ 11,964,006	\$ -	\$ 11,964,006
26								
27	Depreciation & Amortization Expenses	3,300,667	270,232	3,570,899	(3,265)	3,567,635	-	3,567,635
28								
29	Taxes							
30	Federal Income Taxes	987,394	(533,009)	454,385	20,780	475,165	1,614,915	2,090,081
31	State Income Taxes	111,542	(11,445)	100,097	4,578	104,675	355,751	460,426
32	Property Taxes	917,960	68,671	986,631	108,105	1,094,736	93,169	1,187,906
33	Other	2,050,122	(1,792,822)	257,300	-	257,300	-	257,300
34	Total Taxes	\$ 4,067,018	\$ (2,268,605)	\$ 1,798,413	\$ 133,463	\$ 1,931,876	\$ 2,063,836	\$ 3,995,712
35								
36	Total Operating Expenses	\$ 18,011,901	\$ (511,986)	\$ 17,499,915	\$ (36,397)	\$ 17,463,517	\$ 2,063,836	\$ 19,527,353
37	Operating Income	\$ 3,911,908	\$ (895,269)	\$ 3,016,638	\$ 36,397	\$ 3,053,036	\$ 3,134,835	\$ 6,187,871
38								
39	Other Income & Deductions:							
40	Interest:							
41	Long-Term Debt	2,105,299	29,297	2,134,597	(3,941)	2,130,656	-	2,130,656
42	Short-Term Debt	48,532	(48,532)	-	-	-	-	-
43	Other	(129,894)	129,894	-	-	-	-	-
44	Total Interest	\$ 2,023,938	\$ 110,659	\$ 2,134,597	\$ (3,941)	\$ 2,130,656	\$ -	\$ 2,130,656
45								
46	Other (Income) - Net	(78,086)	78,086	-	-	-	-	-
47								
48	Total Other (Income) & Deductions	\$ 1,945,852	\$ 188,745	\$ 2,134,597	\$ (3,941)	\$ 2,130,656	\$ -	\$ 2,130,656
49								
50	Net Income	\$ 1,966,056	\$ (1,084,014)	\$ 882,042	\$ 40,338	\$ 922,380	\$ 3,134,835	\$ 4,057,215
51								

Superstition (Apache Junction, Superior, Miami)									
	[A]	[B]	[C]		[D]	[E]	[F]	[G]	
Line No.	Test Year Ended 12/31/2010	Pro Forma Adjustments - As Filed	Adjusted Test Year - As Filed	Rebuttal Adjustments	Adjusted Test Year - Rebuttal	Required Increase - Rebuttal	Adjusted w/ Increase - Rebuttal		
1	Operating Revenues								
2	\$ 12,125,017	\$ (688,426)	\$ 11,436,591	\$ -	\$ 11,436,591				
3	2,887,171	(280,618)	2,606,553	-	2,606,553				
4	95,404	(25,256)	70,149	-	70,149				
5	25,951	25,248	51,199	-	51,199				
6	190,584	(24,366)	166,218	-	166,218				
7	\$ 15,324,127	\$ (993,417)	\$ 14,330,710	\$ -	\$ 14,330,710				
8	Miscellaneous								
9	783,728	(58,271)	725,456	-	725,456				
10	\$ 16,107,855	\$ (1,051,689)	\$ 15,056,166	\$ -	\$ 15,056,166	\$ 3,927,383	\$ 18,983,549		
11	Total Operating Revenues								
12	Operating Expenses								
13	Source of Supply Expenses:								
14	691,466	-	691,466	-	691,466	-	691,466		
15	68,687	4,808	73,495	(454)	73,041	-	73,041		
16	Pumping Expenses:								
17	1,402,065	22,774	1,424,839	208	1,425,047	-	1,425,047		
18	Purchased Power								
19	-	-	-	-	-	-	-		
20	511,114	42,358	553,472	(5,867)	547,605	-	547,605		
21	563,641	33,660	597,301	(569)	596,732	-	596,732		
22	1,293,729	448,640	1,742,369	(14,469)	1,727,900	-	1,727,900		
23	1,127,386	54,809	1,182,195	(13,469)	1,168,726	-	1,168,726		
24	-	-	-	-	-	-	-		
25	1,828,249	262,108	2,090,357	(21,649)	2,068,708	-	2,068,708		
26	\$ 7,486,337	\$ 869,158	\$ 8,355,495	\$ (56,269)	\$ 8,299,226	\$ -	\$ 8,299,226		
27	Depreciation & Amortization Expenses								
28	2,485,880	186,835	2,672,715	(1,019)	2,671,695	-	2,671,695		
29	Taxes								
30	777,203	(328,690)	448,513	(12,123)	436,390	1,218,953	1,655,343		
31	87,797	11,006	98,803	(2,671)	96,133	268,524	364,657		
32	695,522	51,742	747,264	100,384	847,648	73,703	921,351		
33	1,495,955	(1,325,469)	170,486	-	170,486	-	170,486		
34	\$ 3,056,477	\$ (1,591,412)	\$ 1,465,065	\$ 85,591	\$ 1,550,656	\$ 1,561,180	\$ 3,111,837		
35	Total Taxes								
36	\$ 13,028,694	\$ (535,419)	\$ 12,493,275	\$ 28,303	\$ 12,521,578	\$ 1,561,180	\$ 14,082,758		
37	\$ 3,079,161	\$ (516,269)	\$ 2,562,892	\$ (28,303)	\$ 2,534,589	\$ 2,366,203	\$ 4,900,792		
38	Total Operating Expenses								
39	Operating Income								
40	Other Income & Deductions:								
41	Interest:								
42	1,654,064	38,185	1,692,249	(4,771)	1,687,478	-	1,687,478		
43	38,130	(38,130)	-	-	-	-	-		
44	(102,053)	102,053	-	-	-	-	-		
45	\$ 1,590,141	\$ 102,108	\$ 1,692,249	\$ (4,771)	\$ 1,687,478	\$ -	\$ 1,687,478		
46	Total Interest								
47	(56,125)	56,125	-	-	-	-	-		
48	Other (Income) - Net								
49	\$ 1,534,016	\$ 158,233	\$ 1,692,249	\$ (4,771)	\$ 1,687,478	\$ -	\$ 1,687,478		
50	\$ 1,545,145	\$ (674,503)	\$ 870,642	\$ (23,532)	\$ 847,110	\$ 2,366,203	\$ 3,213,313		
	Total Other (Income) & Deductions								
	Net Income								



Cochise (Bisbee, Sierra Vista)									
[A]	[B]	[C]	[D]	[E]	[F]	[G]			
Test Year Ended 12/31/2010	Pro Forma Adjustments - As Filed	Adjusted Test Year - As Filed	Rebuttal Adjustments	Adjusted Test Year - Rebuttal	Required Increase - Rebuttal	Adjusted w/ Increase - Rebuttal			
Operating Revenues									
1 Residential	\$ 2,440,538	\$ (170,018)	\$ -	\$ 2,270,520		\$ 2,270,520			
2 Commercial	906,126	(43,055)	-	863,072		863,072			
3 Industrial	2,981	361	-	3,342		3,342			
4 Private Fire Service	8,627	8,020	-	16,647		16,647			
5 Other Water Revenues	122,126	(15,034)	-	107,091		107,091			
6 Total Water Revenues	\$ 3,480,396	\$ (219,726)	\$ -	\$ 3,260,672		\$ 3,260,672			
7									
8									
Miscellaneous	46,914	(4,037)	-	42,877		42,877			
9 Total Operating Revenues	\$ 3,527,312	\$ (223,763)	\$ -	\$ 3,303,549	\$ 705,007	\$ 4,008,556			
10									
11									
Operating Expenses									
12 Source of Supply Expenses:									
13 Purchased Water	-	-	-	-	-	-			
14 Other	32,134	4,705	-	36,839	(429)	36,410			36,410
15									
Pumping Expenses:									
16 Purchased Power	445,426	2,855	-	448,281	3,104	451,385			451,385
17 Purchased Gas	1,606	-	-	1,606	-	1,606			1,606
18 Other	86,363	17,131	-	103,494	(1,635)	101,859			101,859
19 Water Treatment Expenses	87,444	(12,280)	-	75,164	(501)	74,663			74,663
20 Transmission & Distribution Expenses	401,330	163,115	-	564,445	(5,256)	559,189			559,189
21 Customer Accounting Expenses	323,274	32,397	-	355,671	(2,950)	352,721			352,721
22 Sales Expense	-	-	-	-	-	-			-
23 Administrative & General Expenses	502,102	71,125	-	573,227	(3,533)	569,694			569,694
24 Total Operations & Maintenance Expense	\$ 1,879,679	\$ 279,048	\$ -	\$ 2,158,727	\$ (11,200)	\$ 2,147,527			\$ 2,147,527
25									
26 Depreciation & Amortization Expenses	464,098	34,618	-	498,716	(2,613)	496,103			496,103
27									
28									
Taxes									
29 Federal Income Taxes	135,289	(83,277)	-	52,012	4,720	56,732			219,826
30 State Income Taxes	15,283	(3,825)	-	11,458	1,040	12,498			60,923
31 Property Taxes	128,907	9,065	-	137,972	3,079	141,051			151,085
32 Other	368,064	(310,479)	-	57,585	-	57,585			57,585
33 Total Taxes	\$ 647,543	\$ (388,516)	\$ -	\$ 259,027	\$ 8,839	\$ 267,865			\$ 278,286
34									
35 Total Operating Expenses	\$ 2,991,320	\$ (74,850)	\$ -	\$ 2,916,470	\$ (4,975)	\$ 2,911,495			\$ 2,911,495
36 Operating Income	\$ 535,992	\$ (148,913)	\$ -	\$ 387,079	\$ 4,975	\$ 392,054			\$ 426,721
37									
38									
Other Income & Deductions:									
39 Interest:									
40 Long-Term Debt	287,186	(1,071)	-	286,114	(4,188)	281,927			281,927
41 Short-Term Debt	6,620	(6,620)	-	-	-	-			-
42 Other	(17,719)	17,719	-	-	-	-			-
43 Total Interest	\$ 276,087	\$ 10,027	\$ -	\$ 286,114	\$ (4,188)	\$ 281,927			\$ 281,927
44									
45 Other (Income) - Net	(14,085)	14,085	-	-	-	-			-
46									
47 Total Other (Income) & Deductions	\$ 262,002	\$ 24,113	\$ -	\$ 286,114	\$ (4,188)	\$ 281,927			\$ 281,927
48									
49 Net Income	\$ 273,991	\$ (173,026)	\$ -	\$ 100,965	\$ 9,162	\$ 110,127			\$ 426,721
50									
51									
52									
53									
54									
55									

San Manuel									
[A]	[B]	[C]	[D]	[E]	[F]	[G]			
Test Year Ended 12/31/2010	Pro Forma Adjustments - As Filed	Adjusted Test Year - As Filed	Rebuttal Adjustments	Adjusted Test Year - Rebuttal	Required Increase - Rebuttal	Adjusted w/ Increase - Rebuttal			
Operating Revenues									
1 Residential									
2 Commercial									
3 Industrial									
4 Private Fire Service									
5 146									
6 Other Water Revenues									
7 10,018									
8 959,880									
Total Water Revenues									
9 16,436									
10 Miscellaneous									
11 976,316									
Total Operating Revenues									
12 Operating Expenses									
13 Source of Supply Expenses:									
14 Purchased Water									
15 Other									
16 Pumping Expenses:									
17 Purchased Power									
18 Purchased Gas									
19 Other									
20 Water Treatment Expenses									
21 Transmission & Distribution Expenses									
22 Customer Accounting Expenses									
23 Sales Expense									
24 Administrative & General Expenses									
25 Total Operations & Maintenance Expense									
26 607,403									
27 Depreciation & Amortization Expenses									
28 75,433									
29 Taxes									
30 Federal Income Taxes									
31 State Income Taxes									
32 Property Taxes									
33 Other									
34 Total Taxes									
35 159,592									
36 Total Operating Expenses									
37 842,428									
38 Operating Income									
39 133,888									
40 Other Income & Deductions:									
41 Interest:									
42 Long-Term Debt									
43 Short-Term Debt									
44 Other									
45 Total Interest									
46 69,830									
47 Other (Income) - Net									
48 (3,213)									
49 Total Other (Income) & Deductions									
50 66,618									
51 Net Income									
52 67,270									
53									
54									
55									

Oracle									
Line No.	[A] Test Year Ended 12/31/2010	[B] Pro Forma Adjustments - As Filed	[C] Adjusted Test Year - As Filed	[D] Rebuttal Adjustments	[E] Adjusted Test Year - Rebuttal	[F] Required Increase - Rebuttal	[G] Adjusted w/ Increase - Rebuttal		
1	Operating Revenues								
2	Residential	\$ 885,183	\$ (84,129)	\$ 801,054	\$ -	\$ 801,054			
3	Commercial	178,838	(22,401)	156,437	-	156,437			
4	Industrial	-	-	-	-	-			
5	Private Fire Service	145	138	283	-	283			
6	Other Water Revenues	21,055	(1,214)	19,841	-	19,841			
7	Total Water Revenues	\$ 1,085,220	\$ (107,605)	\$ 977,615	\$ -	\$ 977,615			
8									
9	Miscellaneous	13,346	(852)	12,494	-	12,494			
10	Total Operating Revenues	\$ 1,098,566	\$ (108,457)	\$ 990,109	\$ -	\$ 990,109	\$ 130,819	\$	1,120,928
11									
12	Operating Expenses								
13	Source of Supply Expenses:								
14	Purchased Water	-	-	-	-	-	-	-	-
15	Other	4,996	207	5,203	(50)	5,153	-	-	5,153
16	Pumping Expenses:								
17	Purchased Power	107,256	(102)	107,154	102	107,256	-	-	107,256
18	Purchased Gas	-	-	-	-	-	-	-	-
19	Other	34,254	5,142	39,396	(88)	39,308	-	-	39,308
20	Water Treatment Expenses	21,005	(3,997)	17,008	(88)	16,940	-	-	16,940
21	Transmission & Distribution Expenses	94,494	33,239	127,733	(1,374)	126,359	-	-	126,359
22	Customer Accounting Expenses	99,824	3,226	103,050	(650)	102,400	-	-	102,400
23	Sales Expense	-	-	-	-	-	-	-	-
24	Administrative & General Expenses	131,434	15,763	147,197	(1,061)	146,136	-	-	146,136
25	Total Operations & Maintenance Expense	\$ 493,263	\$ 53,476	\$ 546,739	\$ (3,189)	\$ 543,550	\$ -	\$	543,550
26									
27	Depreciation & Amortization Expenses	167,307	9,502	176,809	346	177,155	-	-	177,155
28									
29	Taxes								
30	Federal Income Taxes	60,149	(18,578)	41,571	(361)	41,210	40,782	-	81,992
31	State Income Taxes	6,795	2,363	9,158	(79)	9,078	8,984	-	18,062
32	Property Taxes	43,951	(4,156)	39,795	3,053	42,848	1,887	-	44,735
33	Other	88,800	(76,112)	12,688	-	12,688	-	-	12,688
34	Total Taxes	\$ 199,695	\$ (96,484)	\$ 103,211	\$ 2,613	\$ 105,824	\$ 51,654	\$	157,477
35									
36	Total Operating Expenses	\$ 860,265	\$ (33,505)	\$ 826,760	\$ (230)	\$ 826,530	\$ 51,654	\$	878,183
37	Operating Income	\$ 238,301	\$ (74,952)	\$ 163,349	\$ 230	\$ 163,579	\$ 79,166	\$	242,745
38									
39	Other Income & Deductions:								
40	Interest:								
41	Long-Term Debt	83,662	(1,009)	82,653	931	83,584	-	-	83,584
42	Short-Term Debt	1,929	(1,929)	-	-	-	-	-	-
43	Other	(5,162)	5,162	-	-	-	-	-	-
44	Total Interest	\$ 80,429	\$ 2,225	\$ 82,653	\$ 931	\$ 83,584	\$ -	\$	83,584
45									
46	Other (Income) - Net	(3,996)	3,996	-	-	-	-	-	-
47									
48	Total Other (Income) & Deductions	\$ 76,432	\$ 6,221	\$ 82,653	\$ 931	\$ 83,584	\$ -	\$	83,584
49									
50	Net Income	\$ 161,869	\$ (81,173)	\$ 80,696	\$ (700)	\$ 79,996	\$ 79,166	\$	159,161
51									
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SaddleBrooke Ranch									
Line No.	(A) Test Year Ended 12/31/2010	(B) Pro Forma Adjustments - As Filed	(C) Adjusted Test Year - As Filed	(D) Rebuttal Adjustments	(E) Adjusted Test Year - Rebuttal	(F) Required Increase - Rebuttal	(G) Adjusted w/ Increase - Rebuttal		
1	Operating Revenues								
2	Residential	\$ 37,169	\$ 7,958	\$ 45,127	\$ -	\$ 45,127			
3	Commercial	59,615	1,661	61,277	-	61,277			
4	Industrial	-	-	-	-	-			
5	Private Fire Service	92	(7)	85	-	85			
6	Other Water Revenues	9,762	(730)	9,032	-	9,032			
7	Total Water Revenues	\$ 106,638	\$ 8,883	\$ 115,521	\$ -	\$ 115,521			
8									
9	Miscellaneous	1,703	(121)	1,582	-	1,582			
10	Total Operating Revenues	\$ 108,341	\$ 8,762	\$ 117,103	\$ -	\$ 117,103	\$ 127,571	\$ 244,673	
11									
12	Operating Expenses								
13	Source of Supply Expenses:								
14	Purchased Water	-	-	-	-	-	-	-	-
15	Other	204	42	246	-	246	-	246	-
16	Pumping Expenses:								
17	Purchased Power	103,754	-	103,754	-	103,754	-	103,754	-
18	Purchased Gas	-	-	-	-	-	-	-	-
19	Other	2,271	15,432	17,703	18	17,721	-	17,721	-
20	Water Treatment Expenses	634	119	753	-	753	-	753	-
21	Transmission & Distribution Expenses	4,418	2,772	7,190	(20)	7,170	-	7,170	-
22	Customer Accounting Expenses	6,098	2,004	8,102	(8)	8,094	-	8,094	-
23	Sales Expense	-	-	-	-	-	-	-	-
24	Administrative & General Expenses	7,149	2,958	10,107	(77)	10,030	-	10,030	-
25	Total Operations & Maintenance Expense	\$ 124,528	\$ 23,328	\$ 147,856	\$ (87)	\$ 147,769	\$ -	\$ 147,769	
26									
27	Depreciation & Amortization Expenses	80,591	8,837	89,428	2	89,429	-	89,429	
28									
29	Taxes								
30	Federal Income Taxes	(20,654)	(17,889)	(38,543)	(1,226)	(39,770)	39,770	(0)	(0)
31	State Income Taxes	(2,333)	(6,158)	(8,491)	(270)	(8,761)	8,761	(0)	(0)
32	Property Taxes	-	5,275	5,275	(207)	5,068	1,840	6,908	
33	Other	8,035	(7,468)	567	-	567	-	567	
34	Total Taxes	\$ (14,952)	\$ (26,240)	\$ (41,192)	\$ (1,704)	\$ (42,895)	\$ 50,371	\$ 7,475	
35									
36	Total Operating Expenses	\$ 190,167	\$ 5,924	\$ 196,091	\$ (1,789)	\$ 194,302	\$ 50,371	\$ 244,673	
37	Operating Income	\$ (81,826)	\$ 2,837	\$ (78,989)	\$ 1,789	\$ (77,200)	\$ 77,200	\$ (0)	
38									
39	Other Income & Deductions:								
40	Interest:								
41	Long-Term Debt	(2,935)	(1,235)	(4,169)	4,169	-	-	-	-
42	Short-Term Debt	(68)	68	-	-	-	-	-	-
43	Other	181	(181)	-	-	-	-	-	-
44	Total Interest	\$ (2,821)	\$ (1,348)	\$ (4,169)	\$ 4,169	\$ -	\$ -	\$ -	
45									
46	Other (Income) - Net	(294)	294	-	-	-	-	-	-
47									
48	Total Other (Income) & Deductions	\$ (3,115)	\$ (1,054)	\$ (4,169)	\$ 4,169	\$ -	\$ -	\$ -	
49									
50	Net Income	\$ (78,711)	\$ 3,891	\$ (74,819)	\$ (2,380)	\$ (77,200)	\$ 77,200	\$ (0)	
51									
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Winkelman									
[A]	[B]	[C]	[D]	[E]	[F]	[G]			
Line No.	Test Year Ended 12/31/2010	Pro Forma Adjustments - As Filed	Adjusted Test Year - As Filed	Rebuttal Adjustments	Adjusted Test Year - Rebuttal	Required Increase - Rebuttal	Adjst'd w/ Increase - Rebuttal		
1	Operating Revenues								
2	Residential	\$ 53,799	\$ 443	\$ 54,242	\$ -	\$ 54,242			
3	Commercial	46,764	(3,666)	43,098	-	43,098			
4	Industrial	3,046	43	3,089	-	3,089			
5	Private Fire Service	-	-	-	-	-			
6	Other Water Revenues	-	-	-	-	-			
7	Total Water Revenues	\$ 103,609	\$ (3,180)	\$ 100,429	\$ -	\$ 100,429			
8	Miscellaneous								
9		\$ 1,809	(140)	1,669	-	1,669			
10	Total Operating Revenues	\$ 105,418	\$ (3,320)	\$ 102,098	\$ -	\$ 102,098	\$ 31,855	\$	133,953
11	Operating Expenses								
12	Source of Supply Expenses:								
13	Purchased Water								
14	Other	372	16	388	(5)	383	-	-	383
15	Pumping Expenses:								
16	Purchased Power	6,511	270	6,781	41	6,822	-	-	6,822
17	Purchased Gas		-	-	-	-			
18	Other	3,659	449	4,108	(7)	4,101	-	-	4,101
19	Water Treatment Expenses	8,215	(854)	7,361	(7)	7,354	-	-	7,354
20	Transmission & Distribution Expenses	10,565	6,052	16,617	(144)	16,473	-	-	16,473
21	Customer Accounting Expenses	10,444	229	10,673	(47)	10,626	-	-	10,626
22	Sales Expense		-	-	-	-			
23	Administrative & General Expenses	13,240	1,517	14,757	(83)	14,674	-	-	14,674
24	Total Operations & Maintenance Expense	\$ 53,006	\$ 7,681	\$ 60,687	\$ (252)	\$ 60,435	\$ -	\$	60,435
25	Depreciation & Amortization Expenses	27,358	(7,063)	20,295	2	20,297	-	-	20,297
26	Taxes								
27	Federal Income Taxes	1,613	(1,168)	445	(171)	274	9,783		10,057
28	State Income Taxes	182	(84)	98	(38)	60	2,155		2,215
29	Property Taxes	7,620	484	8,104	806	8,910	927		9,837
30	Other	9,248	(7,909)	1,339	-	1,339	-	-	1,339
31	Total Taxes	\$ 18,663	\$ (8,677)	\$ 9,986	\$ 597	\$ 10,583	\$ 12,865	\$	23,448
32	Total Operating Expenses	\$ 99,027	\$ (8,060)	\$ 90,967	\$ 347	\$ 91,315	\$ 12,865	\$	104,179
33	Operating Income	\$ 6,391	\$ 4,740	\$ 11,131	\$ (347)	\$ 10,784	\$ 18,990	\$	29,774
34	Other Income & Deductions:								
35	Interest:								
36	Long-Term Debt	10,684	(417)	10,268	(16)	10,252	-	-	10,252
37	Short-Term Debt	246	(246)	-	-	-	-	-	-
38	Other	(659)	659	-	-	-	-	-	-
39	Total Interest	\$ 10,271	\$ (4)	\$ 10,268	\$ (16)	\$ 10,252	\$ -	\$	10,252
40	Other (Income) - Net	(372)	372	-	-	-	-	-	-
41	Total Other (Income) & Deductions	\$ 9,899	\$ 368	\$ 10,268	\$ (16)	\$ 10,252	\$ -	\$	10,252
42	Net Income	\$ (3,508)	\$ 4,371	\$ 863	\$ (332)	\$ 532	\$ 18,990	\$	19,522

Eastern Group												
Line No.	[A] Actual End of Test Year	[B] Pro Forma Adjustments - As Filed	[C] Adjusted Test Year - As Filed	[D]		[E]		[F]		[G]		[K] Rebuttal BLANK
				Rebuttal Adj. IS-1	Rebuttal Adj. IS-2	Rebuttal Adj. IS-3	Rebuttal Adj. IS-4	Rebuttal Adj. IS-5	Rebuttal Adj. IS-6	Rebuttal Adj. IS-7	Rebuttal Adj. IS-8	
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Eastern Group

Line No.	[L]	[M]	[N]	[O]	[P]	[Q]	[R]	[S]	[T]	[U]	[V]
	Rebuttal	Rebuttal	Rebuttal	Rebuttal	Rebuttal	Rebuttal	Rebuttal	Total	Adjusted	Required	Adjst'd w/ Increase - Rebuttal
	BLANK	BLANK	BLANK	Adj. IS-6	Adj. IS-7	Adj. IS-8	Adj. IS-9	Adjustments	Test Year - Rebuttal	Increase - Rebuttal	
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Superstition (Apache Junction, Superior, Miami)												
Line No.	[A] Actual End of Test Year	[B] Pro Forma Adjustments - As Filed	[C] Adjusted Test Year - As Filed	[D] Rebuttal Adj. IS-1	[E] Rebuttal Adj. IS-2	[F] Rebuttal Adj. IS-3	[G] Rebuttal Adj. IS-4	[H] Rebuttal Adj. IS-5	[I] Rebuttal BLANK	[J] Rebuttal BLANK	[K] Rebuttal BLANK	
1	Operating Revenues											
2	Residential	\$ 12,125,017	\$ (688,426)	\$ 11,436,591								
3	Commercial	2,887,171	(280,618)	2,606,553								
4	Industrial	95,404	(25,256)	70,149								
5	Private Fire Service	25,951	25,248	51,199								
6	Other Water Revenues	190,584	(24,366)	166,218								
7	Total Water Revenues	\$ 15,324,127	\$ (993,417)	\$ 14,330,710	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
8	Miscellaneous	783,728	(58,271)	725,456								
9	Total Operating Revenues	\$ 16,107,855	\$ (1,051,689)	\$ 15,056,166	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
10	Operating Expenses											
11	Source of Supply Expenses:											
12	Purchased Water	691,466	-	691,466								
13	Other	68,687	4,808	73,495	(454)							
14	Pumping Expenses:											
15	Purchased Power	1,402,065	22,774	1,424,839	208							
16	Purchased Gas											
17	Other	511,114	42,358	553,472	(5,867)							
18	Water Treatment Expenses	563,641	33,660	597,301	(569)							
19	Transmission & Distribution Expenses	1,293,729	448,640	1,742,369	(14,469)							
20	Customer Accounting Expenses	1,127,386	54,809	1,182,195	(13,469)							
21	Sales Expense											
22	Administrative & General Expenses	1,828,249	262,108	2,090,357	(7,277)							
23	Total Operations & Maintenance Expense	\$ 7,486,337	\$ 869,158	\$ 8,355,495	\$ (41,897)	\$ -	\$ (6,850)	\$ (7,522)	\$ -	\$ -	\$ -	
24	Depreciation & Amortization Expenses	2,485,880	186,835	2,672,715								
25	Taxes											
26	Federal Income Taxes	777,203	(328,690)	448,513								
27	State Income Taxes	87,797	11,006	98,803								
28	Property Taxes	695,522	51,742	747,264								
29	Other	1,495,955	(1,325,469)	170,486								
30	Total Taxes	\$ 3,056,477	\$ (1,591,412)	\$ 1,465,065	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
31	Total Operating Expenses	\$ 13,028,694	\$ (535,419)	\$ 12,493,275	\$ (41,897)	\$ -	\$ (6,850)	\$ (7,522)	\$ -	\$ -	\$ -	
32	Operating Income	\$ 3,079,161	\$ (516,269)	\$ 2,562,892	\$ 41,897	\$ -	\$ 6,850	\$ 7,522	\$ -	\$ -	\$ -	
33	Other Income & Deductions:											
34	Interest:											
35	Long-Term Debt	1,654,064	38,185	1,692,249								
36	Short-Term Debt	38,130	(38,130)	-								
37	Other	(102,053)	102,053	-								
38	Total Interest	\$ 1,590,141	\$ 102,108	\$ 1,692,249	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
39	Other (Income) - Net	(56,125)	56,125	-								
40	Total Other (Income) & Deductions	\$ 1,534,016	\$ 158,233	\$ 1,692,249	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
41	Net Income	\$ 1,545,145	\$ (674,503)	\$ 870,642	\$ 41,897	\$ -	\$ 6,850	\$ 7,522	\$ -	\$ -	\$ -	
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Superstition (Apache Junction, Superior, Miami)												
Line	[L]	[M]	[N]	[O]	[P]	[Q]	[R]	[S]	[T]	[U]	[V]	
	Rebuttal	Rebuttal	Rebuttal	Rebuttal	Rebuttal	Rebuttal	Rebuttal	Total	Adjusted	Required	Adj'd w/	
	BLANK	BLANK	BLANK	Adj. IS-6	Adj. IS-7	Adj. IS-8	Adj. IS-9	Rebuttal	Test Year -	Increase -	Increase -	
								Adjustments	Rebuttal	Rebuttal	Rebuttal	
1	Operating Revenues											
2	Residential							\$	\$ 11,436,591			
3	Commercial							-	2,606,553			
4	Industrial							-	70,149			
5	Private Fire Service							-	51,199			
6	Other Water Revenues							-	166,218			
7	Total Water Revenues	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 14,330,710			
8												
9	Miscellaneous								725,456			
10	Total Operating Revenues	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 15,056,166	\$ 3,927,383	\$ 18,983,549	
11												
12	Operating Expenses											
13	Source of Supply Expenses:											
14	Purchased Water											
15	Other							-	691,466		691,466	
16	Pumping Expenses:							(454)	73,041		73,041	
17	Purchased Power							208	1,425,047		1,425,047	
18	Purchased Gas							-	-		-	
19	Other							(5,867)	547,605		547,605	
20	Water Treatment Expenses							(569)	596,732		596,732	
21	Transmission & Distribution Expenses							(14,469)	1,727,900		1,727,900	
22	Customer Accounting Expenses							(13,469)	1,168,726		1,168,726	
23	Sales Expense							-	-		-	
24	Administrative & General Expenses							(21,649)	2,068,708		2,068,708	
25	Total Operations & Maintenance Expense	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ (56,269)	\$ 8,299,226	\$ -	\$ 8,299,226	
26												
27	Depreciation & Amortization Expenses							(1,019)	2,671,695		2,671,695	
28												
29	Taxes											
30	Federal Income Taxes											
31	State Income Taxes							(12,123)	436,390	1,218,953	1,655,343	
32	Property Taxes							(2,671)	96,133	288,524	364,657	
33	Other					100,384		100,384	847,648	73,703	921,351	
34	Total Taxes	\$ -	\$ -	\$ -	\$ -	\$ 100,384	\$ (14,793)	\$ 85,591	\$ 1,550,656	\$ 1,581,180	\$ 170,486	
35												
36	Total Operating Expenses	\$ -	\$ -	\$ -	\$ (1,019)	\$ 100,384	\$ (14,793)	\$ 28,303	\$ 12,521,578	\$ 1,581,180	\$ 14,082,758	
37	Operating Income	\$ -	\$ -	\$ -	\$ 1,019	\$ (100,384)	\$ 14,793	\$ (28,303)	\$ 2,534,589	\$ 2,366,203	\$ 4,900,792	
38												
39	Other Income & Deductions:											
40	Interest:											
41	Long-Term Debt											
42	Short-Term Debt											
43	Other											
44	Total Interest							(4,771)	1,687,478		1,687,478	
45												
46	Other (Income) - Net											
47												
48	Total Other (Income) & Deductions	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ (4,771)	\$ 1,687,478	\$ -	\$ 1,687,478	
49												
50	Net Income	\$ -	\$ -	\$ -	\$ 1,019	\$ (100,384)	\$ 14,793	\$ (23,532)	\$ 847,110	\$ 2,366,203	\$ 3,213,313	
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Cochise (Bisbee, Sierra Vista)												
Line No.	Description	[A] Actual End of Test Year	[B] Pro Forma Adjustments - As Filed	[C] Adjusted Test Year - As Filed	[D] Rebuttal Adj. IS-1	[E] Rebuttal Adj. IS-2	[F] Rebuttal Adj. IS-3	[G] Rebuttal Adj. IS-4	[H] Rebuttal Adj. IS-5	[I] Rebuttal BLANK	[J] Rebuttal BLANK	[K] Rebuttal BLANK
1	Operating Revenues											
2	Residential	\$ 2,440,538	\$ (170,018)	\$ 2,270,520								
3	Commercial	906,126	(43,055)	863,072								
4	Industrial	2,981	361	3,342								
5	Private Fire Service	8,627	8,020	16,647								
6	Other Water Revenues	122,126	(15,034)	107,091								
7	Total Water Revenues	\$ 3,480,398	\$ (219,726)	\$ 3,260,672	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8												
9	Miscellaneous	46,914	(4,037)	42,877								
10	Total Operating Revenues	\$ 3,527,312	\$ (223,763)	\$ 3,303,549	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
11												
12	Operating Expenses											
13	Source of Supply Expenses:											
14	Purchased Water											
15	Other	32,134	4,705	36,839	(429)							
16	Pumping Expenses:											
17	Purchased Power	445,426	2,855	448,281	3,104							
18	Purchased Gas	1,606	-	1,606								
19	Other	86,363	17,131	103,494	(1,635)							
20	Water Treatment Expenses	87,444	(12,280)	75,164	(501)							
21	Transmission & Distribution Expenses	401,330	163,115	564,445	(5,256)							
22	Customer Accounting Expenses	323,274	32,397	355,671	(2,950)							
23	Sales Expense		-	-								
24	Administrative & General Expenses	502,102	71,125	573,227	(1,739)			(1,794)				
25	Total Operations & Maintenance Expense	\$ 1,879,679	\$ 279,048	\$ 2,158,727	\$ (9,406)	\$ -	\$ -	\$ (1,794)	\$ -	\$ -	\$ -	\$ -
26												
27	Depreciation & Amortization Expenses	464,098	34,618	498,716								
28												
29	Taxes											
30	Federal Income Taxes	135,289	(83,277)	52,012								
31	State Income Taxes	15,283	(3,825)	11,458								
32	Property Taxes	128,907	9,065	137,972								
33	Other	368,064	(310,479)	57,585								
34	Total Taxes	\$ 647,543	\$ (388,516)	\$ 259,027	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
35												
36	Total Operating Expenses	\$ 2,991,320	\$ (74,850)	\$ 2,916,470	\$ (9,406)	\$ -	\$ -	\$ (1,794)	\$ -	\$ -	\$ -	\$ -
37	Operating Income	\$ 535,992	\$ (148,913)	\$ 387,079	\$ 9,406	\$ -	\$ -	\$ 1,794	\$ -	\$ -	\$ -	\$ -
38												
39	Other Income & Deductions:											
40	Interest:											
41	Long-Term Debt	287,186	(1,071)	286,114								
42	Short-Term Debt	6,620	(6,620)	-								
43	Other	(17,719)	17,719	-								
44	Total Interest	\$ 276,087	\$ 10,027	\$ 286,114	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
45												
46	Other (Income) - Net	(14,085)	14,085	-								
47												
48	Total Other (Income) & Deductions	\$ 262,002	\$ 24,113	\$ 286,114	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
49												
50	Net Income	\$ 273,991	\$ (173,026)	\$ 100,965	\$ 9,406	\$ -	\$ -	\$ 1,794	\$ -	\$ -	\$ -	\$ -
51												
52												
53												
54												
55												

Cochise (Bisbee, Sierra Vista)											
Line No.	[L]	[M]	[N]		[O]		[P]		[Q]		[R]
			Rebuttal	Rebuttal	Rebuttal	Rebuttal	Rebuttal	Rebuttal	Rebuttal	Rebuttal	
	BLANK	BLANK	BLANK	BLANK	Adj. IS-6	Adj. IS-7	Adj. IS-8	Adj. IS-9	Total Rebuttal Adjustments	[S]	[T]
											Adjusted Test Year - Rebuttal
											Required Increase - Rebuttal
											Adj'd w/ Increase - Rebuttal
1	Operating Revenues										
2	Residential										
3	Commercial										
4	Industrial										
5	Private Fire Service										
6	Other Water Revenues										
7	Total Water Revenues										
8											
9	Miscellaneous										
10	Total Operating Revenues										
11											
12	Operating Expenses										
13	Source of Supply Expenses:										
14	Purchased Water										
15	Other										
16	Pumping Expenses:										
17	Purchased Power										
18	Purchased Gas										
19	Other										
20	Water Treatment Expenses										
21	Transmission & Distribution Expenses										
22	Customer Accounting Expenses										
23	Sales Expense										
24	Administrative & General Expenses										
25	Total Operations & Maintenance Expense										
26											
27	Depreciation & Amortization Expenses										
28											
29	Taxes										
30	Federal Income Taxes										
31	State Income Taxes										
32	Property Taxes										
33	Other										
34	Total Taxes										
35											
36	Total Operating Expenses										
37	Operating Income										
38											
39	Other Income & Deductions:										
40	Interest:										
41	Long-Term Debt										
42	Short-Term Debt										
43	Other										
44	Total Interest										
45											
46	Other (Income) - Net										
47											
48	Total Other (Income) & Deductions										
49											
50	Net Income										
51											
52											
53											
54											
55											

San Manuel																		
Line No.	[A] Actual End of Test Year	[B] Pro Forma Adjustments - As Filed	[C] Adjusted Test Year - As Filed	[D]		[E]		[F]		[G]		[H]		[I]		[J]		[K] Rebuttal BLANK
				Rebuttal Adj. IS-1	Rebuttal Adj. IS-2	Rebuttal Adj. IS-3	Rebuttal Adj. IS-4	Rebuttal Adj. IS-5	Rebuttal Adj. IS-6	Rebuttal Adj. IS-7	Rebuttal Adj. IS-8							
1	Operating Revenues																	
2	Residential	\$ 787,294	\$ (23,484)	\$ 763,810														
3	Commercial	162,422	(2,958)	159,464														
4	Industrial	-	-	-														
5	Private Fire Service	146	141	287														
6	Other Water Revenues	10,018	(1,379)	8,639														
7	Total Water Revenues	\$ 959,880	\$ (27,680)	\$ 932,200	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8																		
9	Miscellaneous	16,436	(1,108)	15,328														
10	Total Operating Revenues	\$ 976,316	\$ (28,788)	\$ 947,528	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
11																		
12	Operating Expenses																	
13	Source of Supply Expenses:																	
14	Purchased Water	174,051	198,916	372,967														
15	Other	3,506	(869)	2,637	(48)											(82,364)		
16	Pumping Expenses:																	
17	Purchased Power	32,531	1,525	34,056	82													
18	Purchased Gas	-	-	-	-													
19	Other	43,866	5,341	49,207	6													
20	Water Treatment Expenses	44,589	10,636	55,225	(77)													
21	Transmission & Distribution Expenses	85,403	18,175	103,578	(1,315)													
22	Customer Accounting Expenses	104,739	4,429	109,168	(1,492)													
23	Sales Expense	-	-	-	-													
24	Administrative & General Expenses	118,718	15,542	134,260	(419)													
25	Total Operations & Maintenance Expense	\$ 607,403	\$ 253,695	\$ 861,098	\$ (3,263)	\$ (9,510)	\$ (462)	\$ (82,364)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
26																		
27	Depreciation & Amortization Expenses	75,433	37,505	112,938														
28																		
29	Taxes																	
30	Federal Income Taxes	33,794	(83,406)	(49,612)														
31	State Income Taxes	3,818	(14,747)	(10,929)														
32	Property Taxes	41,960	6,261	48,221														
33	Other	80,020	(65,385)	14,635														
34	Total Taxes	\$ 159,592	\$ (157,276)	\$ 2,316	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
35																		
36	Total Operating Expenses	\$ 842,428	\$ 133,924	\$ 976,352	\$ (3,263)	\$ (9,510)	\$ (462)	\$ (82,364)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
37	Operating Income	\$ 133,888	\$ (162,712)	\$ (28,824)	\$ 3,263	\$ 9,510	\$ 462	\$ 82,364	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
38																		
39	Other Income & Deductions:																	
40	Interest:																	
41	Long-Term Debt	72,638	(5,156)	67,481														
42	Short-Term Debt	1,674	(1,674)	-														
43	Other	(4,482)	4,482	-														
44	Total Interest	\$ 69,830	\$ (2,349)	\$ 67,481	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
45																		
46	Other (Income) - Net	(3,213)	3,213	-														
47																		
48	Total Other (Income) & Deductions	\$ 66,618	\$ 864	\$ 67,481	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
49																		
50	Net Income	\$ 67,270	\$ (163,575)	\$ (96,305)	\$ 3,263	\$ 9,510	\$ 462	\$ 82,364	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

San Manuel												
Line No.	[L]	[M]	[N]	[O]		[P]	[Q]	[R]	[S]	[T]	[U]	[V]
	Rebuttal BLANK	Rebuttal BLANK	Rebuttal BLANK	Rebuttal Adj. IS-6	Rebuttal Adj. IS-7	Rebuttal Adj. IS-8	Rebuttal Adj. IS-9	Total Rebuttal Adjustments	Adjusted Test Year - Rebuttal	Required Increase - Rebuttal	Adjust'd w/ Increase - Rebuttal	
Operating Revenues												
1												
2												
3												
4												
5												
6												
7												
8												
9												
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28												
29												
30												
31												
32												
33												
34												
35												
36												
37												
38												
Other Income & Deductions:												
39												
40												
41												
42												
43												
44												
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48												
49												
50												

Line No.		Oracle										[K]
		[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]	
		Actual End of Test Year	Pro Forma Adjustments - As Filed	Adjusted Test Year - As Filed	Rebuttal Adj. IS-1	Rebuttal Adj. IS-2	Rebuttal Adj. IS-3	Rebuttal Adj. IS-4	Rebuttal Adj. IS-5	Rebuttal BLANK	Rebuttal BLANK	
1	Operating Revenues											
2	Residential	\$ 885,183	\$ (84,129)	\$ 801,054								
3	Commercial	178,838	(22,401)	156,437								
4	Industrial	-	-	-								
5	Private Fire Service	145	138	283								
6	Other Water Revenues	21,055	(1,214)	19,841								
7	Total Water Revenues	\$ 1,085,220	\$ (107,605)	\$ 977,615	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8												
9	Miscellaneous	13,346	(852)	12,494								
10	Total Operating Revenues	\$ 1,098,566	\$ (108,457)	\$ 990,109	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
11												
12	Operating Expenses											
13	Source of Supply Expenses:											
14	Purchased Water	-	-	-	(50)							
15	Other	4,996	207	5,203								
16	Pumping Expenses:											
17	Purchased Power	107,256	(102)	107,154	102							
18	Purchased Gas											
19	Other	34,254	5,142	39,396	(88)							
20	Water Treatment Expenses	21,005	(3,997)	17,008	(66)							
21	Transmission & Distribution Expenses	94,494	33,239	127,733	(1,374)							
22	Customer Accounting Expenses	99,824	3,226	103,050	(650)							
23	Sales Expense	-	-	-								
24	Administrative & General Expenses	131,434	15,763	147,197	(514)			(547)				
25	Total Operations & Maintenance Expense	\$ 493,263	\$ 53,476	\$ 546,739	\$ (2,642)	\$ -	\$ -	\$ (547)	\$ -	\$ -	\$ -	\$ -
26												
27	Depreciation & Amortization Expenses	167,307	9,502	176,809								
28												
29	Taxes											
30	Federal Income Taxes	60,149	(18,578)	41,571								
31	State Income Taxes	6,795	2,363	9,158								
32	Property Taxes	43,951	(4,156)	39,795								
33	Other	88,800	(76,112)	12,688								
34	Total Taxes	\$ 199,695	\$ (96,484)	\$ 103,211	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
35												
36	Total Operating Expenses	\$ 860,265	\$ (33,505)	\$ 826,760	\$ (2,642)	\$ -	\$ -	\$ (547)	\$ -	\$ -	\$ -	\$ -
37	Operating Income	\$ 238,301	\$ (74,952)	\$ 163,349	\$ 2,642	\$ -	\$ -	\$ 547	\$ -	\$ -	\$ -	\$ -
38												
39	Other Income & Deductions:											
40	Interest:											
41	Long-Term Debt	83,662	(1,009)	82,653								
42	Short-Term Debt	1,929	(1,929)	-								
43	Other	(5,162)	5,162	-								
44	Total Interest	\$ 80,429	\$ 2,225	\$ 82,653	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
45												
46	Other (Income) - Net	(3,996)	3,996	-								
47												
48	Total Other (Income) & Deductions	\$ 76,432	\$ 6,221	\$ 82,653	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
49												
50	Net Income	\$ 161,869	\$ (81,173)	\$ 80,696	\$ 2,642	\$ -	\$ -	\$ 547	\$ -	\$ -	\$ -	\$ -
51												
52												
53												
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55												

Oracle											
Line	[L]	[M]	[N]	[O]	[P]	[Q]	[R]	[S]	[T]	[U]	[V]
	Rebuttal	Rebuttal	Rebuttal	Rebuttal	Rebuttal	Rebuttal	Rebuttal	Total	Adjusted	Required	Adjust w/
	BLANK	BLANK	BLANK	Adj. IS-6	Adj. IS-7	Adj. IS-8	Adj. IS-9	Rebuttal	Test Year -	Increase -	Increase -
								Adjustments	Rebuttal	Rebuttal	Rebuttal
1	Operating Revenues										
2	Residential								\$ 801,054		
3	Commercial								156,437		
4	Industrial										
5	Private Fire Service								283		
6	Other Water Revenues								19,841		
7	Total Water Revenues								\$ 977,615		
8											
9	Miscellaneous								12,494		
10	Total Operating Revenues								\$ 990,109	\$ 130,819	\$ 1,120,928
11											
12	Operating Expenses										
13	Source of Supply Expenses:										
14	Purchased Water										
15	Other								5,153		5,153
16	Pumping Expenses:										
17	Purchased Power								107,256		107,256
18	Purchased Gas										
19	Other								39,308		39,308
20	Water Treatment Expenses								16,940		16,940
21	Transmission & Distribution Expenses								126,359		126,359
22	Customer Accounting Expenses								102,400		102,400
23	Sales Expense										
24	Administrative & General Expenses								146,136		146,136
25	Administrative & Maintenance Expense								543,550		543,550
26	Total Operations & Maintenance Expense								\$ 177,155		177,155
27	Depreciation & Amortization Expenses										
28											
29	Taxes										
30	Federal Income Taxes								41,210	40,782	81,992
31	State Income Taxes								9,078	8,984	18,062
32	Property Taxes								42,848	1,887	44,735
33	Other								12,688		12,688
34	Total Taxes								\$ 105,824	\$ 51,654	\$ 157,477
35											
36	Total Operating Expenses								\$ 826,530	\$ 51,654	\$ 878,183
37	Operating Income								\$ 163,579	\$ 79,166	\$ 242,745
38											
39	Other Income & Deductions:										
40	Interest:										
41	Long-Term Debt										
42	Short-Term Debt										
43	Other										
44	Total Interest										
45	Other (Income) - Net										
46											
47	Total Other (Income) & Deductions								\$ 83,584		\$ 83,584
48											
49	Net Income								\$ 79,996	\$ 79,166	\$ 159,161
50											
51											
52											
53											
54											
55											

Line No.	[A] Actual Test Year	[B] Pro Forma Adjustments - As Filed	[C] Adjusted Test Year - As Filed	[D] Rebuttal Adj. IS-1	[E] Rebuttal Adj. IS-2	[F] Rebuttal Adj. IS-3	[G] Rebuttal Adj. IS-4	[H] Rebuttal Adj. IS-5	[I] Rebuttal BLANK	[J] Rebuttal BLANK	[K] Rebuttal BLANK
1											
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SaddleBrooke Ranch

Line No.	[L]	[M]	[N]	[O]	[P]	[Q]	[R]	[S]	[T]	[U]	[V]
	Rebuttal	Rebuttal	Rebuttal	Rebuttal	Rebuttal	Rebuttal	Rebuttal	Total	Adjusted	Required	Adjust' w/
	BLANK	BLANK	BLANK	Adj. IS-6	Adj. IS-7	Adj. IS-8	Adj. IS-9	Adjustments	Test Year -	Increase -	Increase -
									Rebuttal	Rebuttal	Rebuttal
1	Operating Revenues										
2	Residential								\$ 45,127		
3	Commercial								61,277		
4	Industrial								-		
5	Private Fire Service								85		
6	Other Water Revenues								9,032		
7	Total Water Revenues	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 115,521		
8											
9	Miscellaneous								1,582		
10	Total Operating Revenues	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 117,103	\$ 127,571	\$ 244,673
11											
12	Operating Expenses										
13	Source of Supply Expenses:										
14	Purchased Water										
15	Other								-	246	-
16	Pumping Expenses:										
17	Purchased Power								103,754		103,754
18	Purchased Gas								-		-
19	Other							18	17,721		17,721
20	Water Treatment Expenses							-	753		753
21	Transmission & Distribution Expenses							(20)	7,170		7,170
22	Customer Accounting Expenses							(8)	8,094		8,094
23	Sales Expense							-	-		-
24	Administrative & General Expenses							(77)	10,030		10,030
25	Total Operations & Maintenance Expense	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	(97)	\$ 147,769	\$ -	\$ 147,769
26											
27	Depreciation & Amortization Expenses							2	89,429		89,429
28											
29	Taxes										
30	Federal Income Taxes										
31	State Income Taxes						(1,226)	(1,226)	(39,770)	39,770	(0)
32	Property Taxes						(270)	(270)	(8,761)	8,761	(0)
33	Other					(207)		(207)	5,068	1,840	6,908
34	Total Taxes	\$ -	\$ -	\$ -	\$ -	(207)	(1,496)	(1,704)	567		567
35									(42,895)	\$ 50,371	\$ 7,475
36	Total Operating Expenses	\$ -	\$ -	\$ -	2	(207)	(1,496)	(1,789)	\$ 194,302	\$ 50,371	\$ 244,673
37	Operating Income	\$ -	\$ -	\$ -	(2)	207	1,496	1,789	(77,200)	\$ 77,200	\$ (0)
38											
39	Other Income & Deductions:										
40	Interest:										
41	Long-Term Debt				4,169			4,169	-	-	-
42	Short-Term Debt				-			-	-	-	-
43	Other				-			-	-	-	-
44	Total Interest	\$ -	\$ -	\$ -	4,169	-	-	4,169	\$ -	\$ -	\$ -
45											
46	Other (Income) - Net	\$ -	\$ -	\$ -	-	-	-	-	-	-	-
47											
48	Total Other (Income) & Deductions	\$ -	\$ -	\$ -	4,169	-	-	4,169	\$ -	\$ -	\$ -
49											
50	Net income	\$ -	\$ -	\$ -	(2)	207	1,496	(2,380)	(77,200)	\$ 77,200	\$ (0)
51											
52											
53											
54											
55											

Winkelman																		
Line No.	[A] Actual End of Test Year	[B] Pro Forma Adjustments - As Filed	[C] Adjusted Test Year - As Filed	[D] Rebuttal Adj. IS-1	[E] Rebuttal Adj. IS-2	[F] Rebuttal Adj. IS-3	[G] Rebuttal Income Statement Adjustments			[H] Rebuttal Adj. IS-5	[I] Rebuttal BLANK	[J] Rebuttal BLANK	[K] Rebuttal BLANK					
1	Operating Revenues																	
2	Residential	\$ 53,799	\$ 443	\$ 54,242														
3	Commercial	46,764	(3,666)	43,098														
4	Industrial	3,046	43	3,089														
5	Private Fire Service	-	-	-														
6	Other Water Revenues	-	-	-														
7	Total Water Revenues	\$ 103,609	\$ (3,180)	\$ 100,429	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -					
8	Miscellaneous	1,809	(140)	1,669														
9	Total Operating Revenues	\$ 105,418	\$ (3,320)	\$ 102,098	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -					
10	Operating Expenses																	
11	Source of Supply Expenses:																	
12	Purchased Water	-	-	-														
13	Other	372	16	388	(5)													
14	Pumping Expenses:																	
15	Purchased Power	6,511	270	6,781	41													
16	Purchased Gas	-	-	-														
17	Other	3,659	449	4,108	(7)													
18	Water Treatment Expenses	8,215	(854)	7,361	(7)													
19	Transmission & Distribution Expenses	10,565	6,052	16,617	(144)													
20	Customer Accounting Expenses	10,444	229	10,673	(47)													
21	Sales Expense	-	-	-														
22	Administrative & General Expenses	13,240	1,517	14,757	(48)													
23	Total Operations & Maintenance Expense	\$ 53,006	\$ 7,681	\$ 60,687	\$ (217)	\$ -	\$ -	\$ (35)	\$ -	\$ -	\$ -	\$ -	\$ -					
24	Depreciation & Amortization Expenses	27,358	(7,063)	20,295														
25	Taxes																	
26	Federal Income Taxes	1,613	(1,168)	445														
27	State Income Taxes	182	(84)	98														
28	Property Taxes	7,620	484	8,104														
29	Other	9,248	(7,909)	1,339														
30	Total Taxes	\$ 18,663	\$ (8,677)	\$ 9,986	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -					
31	Total Operating Expenses	\$ 99,027	\$ (8,060)	\$ 90,967	\$ (217)	\$ -	\$ -	\$ (35)	\$ -	\$ -	\$ -	\$ -	\$ -					
32	Operating Income	\$ 6,391	\$ 4,740	\$ 11,131	\$ 217	\$ -	\$ -	\$ 35	\$ -	\$ -	\$ -	\$ -	\$ -					
33	Other Income & Deductions:																	
34	Interest:																	
35	Long-Term Debt	10,684	(417)	10,268														
36	Short-Term Debt	246	(246)	-														
37	Other	(659)	659	-														
38	Total Interest	\$ 10,271	\$ (4)	\$ 10,268	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -					
39	Other (Income) - Net	(372)	372	-														
40	Total Other (Income) & Deductions	\$ 9,899	\$ 368	\$ 10,268	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -					
41	Net Income	\$ (3,508)	\$ 4,371	\$ 863	\$ 217	\$ -	\$ -	\$ 35	\$ -	\$ -	\$ -	\$ -	\$ -					

Winkelman												
Line No.	[L]	[M]	[N]	[O]	[P]	[Q]	[R]	[S]	[T]	[U]	[V]	
	Rebuttal BLANK	Rebuttal BLANK	Rebuttal BLANK	Rebuttal Adj. IS-6	Rebuttal Adj. IS-7	Rebuttal Adj. IS-8	Rebuttal Adj. IS-9	Total Rebuttal Adjustments	Adjusted Test Year - Rebuttal	Required Increase - Rebuttal	Adjist'd w/ Increase - Rebuttal	
1	Operating Revenues											
2	Residential											
3	Commercial											
4	Industrial											
5	Private Fire Service											
6	Other Water Revenues											
7	Total Water Revenues	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 100,429			
8												
9	Miscellaneous											
10	Total Operating Revenues	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 102,098	\$ 31,855	\$ 133,953	
11												
12	Operating Expenses											
13	Source of Supply Expenses:											
14	Purchased Water											
15	Other											
16	Pumping Expenses:											
17	Purchased Power											
18	Purchased Gas											
19	Other											
20	Water Treatment Expenses											
21	Transmission & Distribution Expenses											
22	Customer Accounting Expenses											
23	Sales Expense											
24	Administrative & General Expenses											
25	Total Operations & Maintenance Expense	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 14,674	\$ -	\$ 14,674	
26												
27	Depreciation & Amortization Expenses											
28												
29	Taxes											
30	Federal Income Taxes											
31	State Income Taxes											
32	Property Taxes											
33	Other											
34	Total Taxes	\$ -	\$ -	\$ -	\$ -	\$ 806	\$ (208)	\$ 597	\$ 10,583	\$ 12,865	\$ 23,448	
35												
36	Total Operating Expenses	\$ -	\$ -	\$ -	\$ 2	\$ 806	\$ (208)	\$ 347	\$ 91,315	\$ 12,865	\$ 104,179	
37	Operating Income	\$ -	\$ -	\$ -	\$ (2)	\$ (806)	\$ 208	\$ (347)	\$ 10,784	\$ 18,990	\$ 29,774	
38												
39	Other Income & Deductions:											
40	Interest:											
41	Long-Term Debt											
42	Short-Term Debt											
43	Other											
44	Total Interest	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ (16)	\$ 10,252	\$ -	\$ 10,252	
45												
46	Other (Income) - Net											
47												
48	Total Other (Income) & Deductions	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ (16)	\$ 10,252	\$ -	\$ 10,252	
49												
50	Net Income	\$ -	\$ -	\$ -	\$ (2)	\$ 16	\$ 208	\$ (332)	\$ 532	\$ 18,990	\$ 19,522	

ARIZONA WATER COMPANY

Test Year Ended December 31, 2010

Rebuttal Income Statement Adjustment IS-1

Accept Staff Income Statement Adjustment No. 1 - Unbilled Expense Accruals

Line No.	System	Source of Supply Expense Increase / (Decrease)	Purchased Power Expense Increase / (Decrease)	Pumping - Other Expense Increase / (Decrease)	Water Treatment Expense Increase / (Decrease)	Transmission & Distribution Expense Increase / (Decrease)	Customer Accounting Expense Increase / (Decrease)	Administrative & General Expense Increase / (Decrease)	Total Increase / (Decrease)
1	System								
2									
3	Eastern Group								
4	Superstition	\$ (454)	\$ 208	\$ (5,867)	\$ (569)	\$ (14,469)	\$ (13,469)	\$ (7,277)	\$ (41,897)
5	Cochise	(429)	3,104	(1,635)	(501)	(5,256)	(2,950)	(1,739)	(9,406)
6	San Manuel	(48)	82	6	(77)	(1,315)	(1,492)	(419)	(3,263)
7	Oracle	(50)	102	(98)	(68)	(1,374)	(650)	(514)	(2,642)
8	SaddleBrooke Ranch	-	-	18	-	(20)	(8)	(35)	(45)
9	Winkelman	(5)	41	(7)	(7)	(144)	(47)	(48)	(217)
10									
11	Subtotal	\$ (986)	\$ 3,537	\$ (7,573)	\$ (1,222)	\$ (22,578)	\$ (18,616)	\$ (10,032)	\$ (57,470)
12									
13	Total	\$ (986)	\$ 3,537	\$ (7,573)	\$ (1,222)	\$ (22,578)	\$ (18,616)	\$ (10,032)	\$ (57,470)
14									
15	Increase/(Decrease) in Expenses								
16									
17									
18									
19									
20									
21									
22									
23									
24									
25									
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\$ (57,470)

Line No.	System	Water Testing Expense Increase / (Decrease)
1		
2		
3	Eastern Group	
4	Superstition	
5	Cochise	
6	San Manuel	
7	Oracle	(9,510)
8	SaddleBrooke Ranch	-
9	Winkelman	-
10		
11	Subtotal	\$ (9,510)
12		
13	Total	\$ (9,510)
14		
15		
16	Increase/(Decrease) in Water Treatment Expenses	\$ (9,510)
17		
18		
19		
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ARIZONA WATER COMPANY

Test Year Ended December 31, 2010

Rebuttal Income Statement Adjustment IS-3

Accept Staff Income Statement Adjustment No. 5 - Best Management Practices (BMP) Expense

Line No.		BMP Expense Increase / (Decrease)
1	System	
2		
3	Eastern Group	
4	Superstition	
5	Cochise	\$ (6,850)
6	San Manuel	-
7	Oracle	-
8	SaddleBrooke Ranch	-
9	Winkelman	-
10		
11	Subtotal	\$ (6,850)
12		
13	Total	\$ (6,850)
14		
15		
16	Increase/(Decrease) in Administrative & General Expenses	\$ (6,850)
17		
18		
19		
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21		
22		
23		
24		
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27		
28		
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**ARIZONA WATER COMPANY**

Test Year Ended December 31, 2010  
 Rebuttal Income Statement Adjustment IS-4  
 Accept RUCO Income Statement Adjustment No. 4 - Miscellaneous Expense

Line No.		Miscellaneous Expense Increase / (Decrease)
1	<u>System</u>	
2		
3	Eastern Group	
4	Superstition	
5	Cochise	\$ (7,522)
6	San Manuel	(1,794)
7	Oracle	(462)
8	SaddleBrooke Ranch	(547)
9	Winkelman	(42)
10		(35)
11	Subtotal	\$ (10,402)
12		
13	Total	\$ (10,402)
14		
15		
16	Increase/(Decrease) in Administrative & General Expenses	\$ (10,402)
17		
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ARIZONA WATER COMPANY

Test Year Ended December 31, 2010

Rebuttal Income Statement Adjustment IS-5

Adjust Purchased Water Expense in the San Manuel System to Reflect Updated Purchased Water Rate

Line No.	System	Purchased Water Expense Increase / (Decrease)
1		
2		
3	Eastern Group	
4	Superstition	
5	Cochise	
6	San Manuel	
7	Oracle	
8	SaddleBrooke Ranch	
9	Winkelman	
10		
11	Subtotal	
12		
13	Total	
14		
15		
16	Increase/(Decrease) in Administrative & General Expenses	
17		
18		
19		
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21		
22		
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Supporting Schedules:

N:\2011\_Rate\_Cases\Schedules\Eastern Group\2011 AWC Rate Case Model\REBUTTAL SCHEDULES AWC EG 03.30.12 900am.xlsx\KC2.1

Processing Date: 3/30/2012 11:09 AM

Recap Schedules:



Line No.	Acct. No.	Description	[A] Depreciation Rate	Superstition					[G] Total Increase / (Decrease) [C + D + E + F]
				[B] Rebuttal Rate Base Adjustments - Direct Plant	[C] Rebuttal Rate Base Adjustments - P.T.Y.P.	[D] Increase / (Decrease) Depr. Exp.	[E] Increase / (Decrease) Phoenix Office (3-factor Alloc.) 0.2865	[F] Increase / (Decrease) Meter Shop (3-factor Alloc.) 0.2865	
1		Intangible Plant		\$ -	\$ -	\$ -	\$ -	\$ -	-
2	301	Organization	0.00%	-	-	-	-	-	-
3	302	Franchises	note_1	-	-	-	-	-	-
4	303	Other Intangibles	note_1	-	-	-	-	-	-
5		Subtotal Intangible Plant		\$ -	\$ -	\$ -	\$ -	\$ -	-
6		Source of Supply Plant							
7	310.1	Water Rights	0.00%	-	-	-	-	-	-
8	310.3	Other Source of Supply Land	0.00%	-	-	-	-	-	-
9	310.4	Wells - Other	note_1	-	-	-	-	-	-
10	314	Wells	3.13%	-	-	-	-	-	-
11		Subtotal Source of Supply Plant		\$ (7,699)	\$ -	\$ (241)	\$ -	\$ -	\$ (241)
12		Pumping Plant		\$ (7,699)	\$ -	\$ (241)	\$ -	\$ -	\$ (241)
13	320	Pumping Plant Land	0.00%	-	-	-	-	-	-
14	321	Pumping Plant Structures & Improvements	2.86%	-	-	-	-	-	-
15	325	Electric Pumping Equipment	5.88%	(115)	-	(3)	-	-	(3)
16	328	Gas Engine Equipment	4.00%	(1,540)	34,484	1,937	-	-	1,937
17		Subtotal Pumping Plant		\$ (1,655)	\$ 34,484	\$ 1,934	\$ -	\$ -	\$ 1,934
18		Water Treatment Plant							
19	330	Water Treatment Plant Land	0.00%	-	-	-	-	-	-
20	331	Water Treatment Structures & Improvements	2.50%	-	-	-	-	-	-
21	332	Water Treatment Equipment	2.86%	-	(82,867)	(2,370)	-	-	(2,370)
22		Subtotal Water Treatment Plant		\$ -	\$ (82,867)	\$ (2,370)	\$ -	\$ -	\$ (2,370)
23		Transmission & Distribution Plant							
24	340	Transmission and Distribution Land	0.00%	-	-	-	-	-	-
25	342	Storage Tanks	2.00%	-	764	15	-	-	15
26	343	Transmission & Distribution Mains	1.79%	-	(35,367)	(633)	-	-	(633)
27	344	Fire Sprinkler Taps	2.00%	-	-	-	-	-	-
28	345	Services	2.38%	-	-	-	-	-	-
29	346	Meters	4.55%	-	-	-	-	-	-
30	348	Hydrants	1.82%	-	-	-	-	-	-
31		Subtotal Transmission & Distribution Plant		\$ -	\$ (34,604)	\$ (618)	\$ -	\$ -	\$ (618)
32		General Plant							
33	389	General Plant Land	0.00%	-	-	-	-	-	-
34	390	General Plant Structures	2.50%	-	-	-	-	-	-
35	390.1	Leasehold Improvements	note_2	-	-	-	-	-	-
36	391	Office Furniture & Equipment	6.67%	-	-	-	-	-	-
37	393	Warehouse Equipment	5.00%	-	-	-	-	-	-
38	394	Tools, Shop & Garage Equipment	4.00%	-	-	-	(293)	-	(293)
39	395	Laboratory Equipment	5.00%	-	-	-	-	-	-
40	396	Power Operated Equipment	6.67%	-	-	-	-	-	-
41	397	Communication Equipment	6.67%	-	-	-	-	-	-
42	398	Miscellaneous Equipment	3.33%	-	(565)	(38)	606	-	569
43		Subtotal General Plant		\$ -	\$ (565)	\$ (38)	\$ 313	\$ -	\$ 276
44		Total Depreciation Expense - Utility Plant		\$ (9,354)	\$ (83,551)	\$ (1,333)	\$ 313	\$ -	\$ (1,019)
45		Net Regulatory Assets/(Liabilities) (Sch. B-2 Rebuttal Appendix)							
46		Less: Contributions in Aid of Construction	2.00%						
47		Total Increase/(Decrease) in Depreciation & Amortization Expense - Rebuttal							
48									
49									
50									
51									
52									
53		note_1 Acct. 302 - Franchises amortized over 25 years. Acct. 303 - Other intangibles amortized over 15 & 20 Years.							
54		Acct. 310.4 - Wells - Other amortized over 24 years. Accumulated Amortization booked to Acct. 111 - Amort. Of Ltd. Term Investments.							
55		note_2 Acct. 390.1 - Leasehold improvements amortized over the remaining life of the associated lease.							
									\$ (1,019)

		Cochise						
Line No.	Acct. No.	[A] Depreciation Rate	[B] Rebuttal Rate Base Adjustments - Direct Plant	[C] Rebuttal Rate Base Adjustments - P.T.Y.P.	[D] Increase / (Decrease) Depr. Exp.	[E] Increase / (Decrease) Phoenix Office (3-factor Alloc.) 0.0719	[F] Increase / (Decrease) Meter Shop (3-factor Alloc.) 0.0719	[G] Total Increase / (Decrease) [C + D + E + F]
1	Intangible Plant	0.00%						
2	301 Organization	note_1	\$ -		\$ -	\$ -	\$ -	\$ -
3	302 Franchises	note_1						
4	303 Other Intangibles							
5	Subtotal Intangible Plant		\$ -		\$ -	\$ -	\$ -	\$ -
6	Source of Supply Plant							
7	310.1 Water Rights	0.00%						
8	310.3 Other Source of Supply Land	0.00%						
9	310.4 Wells - Other	note_1						
10	314 Wells	3.13%						
11	Subtotal Source of Supply Plant		\$ -		\$ -	\$ -	\$ -	\$ -
12	Pumping Plant							
13	320 Pumping Plant Land	0.00%						
14	321 Pumping Plant Structures & Improvements	2.86%						
15	325 Electric Pumping Equipment	5.88%						
16	328 Gas Engine Equipment	4.00%						
17	Subtotal Pumping Plant		\$ -		\$ -	\$ -	\$ -	\$ -
18	Water Treatment Plant							
19	330 Water Treatment Plant Land	0.00%						
20	331 Water Treatment Structures & Improvements	2.50%						
21	332 Water Treatment Equipment	2.86%						
22	Subtotal Water Treatment Plant		\$ -		\$ -	\$ -	\$ -	\$ -
23	Transmission & Distribution Plant							
24	340 Transmission and Distribution Land	0.00%						
25	342 Storage Tanks	2.00%						
26	343 Transmission & Distribution Mains	1.79%		(23,852.2)	(427)			(427)
27	344 Fire Sprinkler Taps	2.00%						
28	345 Services	2.38%		(83,266.8)	(1,982)			(1,982)
29	346 Meters	4.55%						
30	348 Hydrants	1.82%		(15,558.0)	(283)			(283)
31	Subtotal Transmission & Distribution Plant		\$ -	(122,677)	\$ (2,692)	\$ -	\$ -	(2,692)
32	General Plant							
33	389 General Plant Land	0.00%						
34	390 General Plant Structures	2.50%						
35	390.1 Leasehold Improvements	note_2						
36	391 Office Furniture & Equipment	6.67%						
37	393 Warehouse Equipment	5.00%						
38	394 Tools, Shop & Garage Equipment	4.00%						
39	395 Laboratory Equipment	5.00%				(74)		(74)
40	396 Power Operated Equipment	6.67%						
41	397 Communication Equipment	6.67%						
42	398 Miscellaneous Equipment	3.33%				152		152
43	Subtotal General Plant		\$ -	\$ -	\$ -	79	\$ -	79
44	Total Depreciation Expense - Utility Plant		\$ -	(122,677)	\$ (2,692)	\$ 79	\$ -	(2,613)
45	Net Regulatory Assets/(Liabilities) (Sch. B-2 Rebuttal Appndx.)							
46	Less: Contributions in Aid of Construction	2.00%						
47	Total Increase/(Decrease) in Depreciation & Amortization Expense - Rebuttal							\$ (2,613)
48								
49								
50								
51								

note\_1 Acct. 302 - Franchises amortized over 25 years. Acct. 303 - Other intangibles amortized over 15 & 20 Years.  
Acct. 310.4 - Wells - Other amortized over 24 years. Accumulated Amortization booked to Acct. 111 - Amort. Of Ltd. Term Investments.  
note\_2 Acct. 390.1 - Leasehold Improvements amortized over the remaining life of the associated lease.

THE MONA WATER COMPANY

THE MONA WATER COMPANY

Rebital Income Statement Adjustment IS-6 (continued)

Adjust Depreciation Expense to Reflect Rebuttal Plant Adjustments

Exhibit  
Schedule C-2 Rebuttal Appendix  
Page 8 of 20  
Witness: Reiker

San Manuel									
[A]	[B]	[C]	[D]	[E]	[F]	[G]			
Line No.	Acct. No.	Depreciation Rate	Rebuttal Rate Base Adjustments - Direct Plant	Rebuttal Rate Base Adjustments - P.T.Y.P.	Increase / (Decrease) Depr. Exp.	Increase / (Decrease) Phoenix Office (3-factor Alloc.) 0.0164	Increase / (Decrease) Meter Shop (3-factor Alloc.) 0.0164	Total Increase / (Decrease) [C + D + E + F]	
1	Intangible Plant	0.00%							
2	Organization	note_1							
3	Franchises	note_1							
4	Other Intangibles								
5	Subtotal Intangible Plant								
6	Source of Supply Plant								
7	310.1 Water Rights								
8	310.3 Other Source of Supply Land	0.00%							
9	310.4 Wells - Other	0.00%							
10	314 Wells	3.13%							
11	Subtotal Source of Supply Plant								
12	Pumping Plant								
13	320 Pumping Plant Land								
14	321 Pumping Plant Structures & Improvements	0.00%							
15	325 Electric Pumping Equipment	2.86%							
16	328 Gas Engine Equipment	5.88%							
17	Subtotal Pumping Plant	4.00%							
18	Water Treatment Plant								
19	330 Water Treatment Plant Land								
20	331 Water Treatment Structures & Improvements	0.00%							
21	332 Water Treatment Equipment	2.50%							
22	Subtotal Water Treatment Plant	2.86%							
23	Transmission & Distribution Plant								
24	340 Transmission and Distribution Land								
25	342 Storage Tanks								
26	343 Transmission & Distribution Mains	0.00%							
27	344 Fire Sprinkler Taps	2.00%							
28	345 Services	1.79%							
29	346 Meters	2.00%							
30	348 Hydrants	2.38%							
31	Subtotal Transmission & Distribution Plant	4.55%							
32	General Plant	1.82%							
33	389 General Plant Land								
34	390 General Plant Structures	0.00%							
35	390.1 Leasehold Improvements	2.50%							
36	391 Office Furniture & Equipment	note_2							
37	393 Warehouse Equipment	6.67%							
38	394 Tools, Shop & Garage Equipment	5.00%							
39	395 Laboratory Equipment	4.00%							
40	396 Power Operated Equipment	5.00%							
41	397 Communication Equipment	6.67%							
42	398 Miscellaneous Equipment	6.67%							
43	Subtotal General Plant	3.33%							
44	Total Depreciation Expense - Utility Plant								
45	Net Regulatory Assets/(Liabilities) (Sch. B-2 Rebuttal Appendix)								
46	Less: Contributions in Aid of Construction								
47	Total Increase/(Decrease) in Depreciation & Amortization Expense - Rebuttal	2.00%							
48	note_1 Acct. 302 - Franchises amortized over 25 years. Acct. 303 - Other intangibles amortized over 15 & 20 Years.								
49	Acct. 310.4 - Wells - Other amortized over 24 years. Accumulated Amortization booked to Acct. 111 - Amort. Of Ltd. Term Investments.								
50	note_2 Acct. 390.1 - Leasehold Improvements amortized over the remaining life of the associated lease								
51									
52									
53									
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								\$ 18	

### Supporting Schedules:

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Recap Schedules:

Line No.	Acct. No.	[A] Depreciation Rate	[B] Rebuttal Rate Base Direct Plant	[C] Rebuttal Rate Base Adjustments - P.T.Y.P.	[D] Increase / (Decrease) Depr. Exp.	[E] Increase / (Decrease) Phoenix Office (3-factor Alloc.) 0.0204	[F] Increase / (Decrease) Meter Shop (3-factor Alloc.) 0.0204	[G] Total Increase / (Decrease) [C + D + E + F]
1	Intangible Plant							
2	301 Organization	0.00%						
3	302 Franchises	note_1						
4	303 Other Intangibles	note_1						
5	Subtotal Intangible Plant							
6	Source of Supply Plant							
7	310.1 Water Rights	0.00%						
8	310.3 Other Source of Supply Land	0.00%						
9	310.4 Wells - Other	note_1						
10	314 Wells	3.13%						
11	Subtotal Source of Supply Plant							
12	Pumping Plant							
13	320 Pumping Plant Land							
14	321 Pumping Plant Structures & Improvements	0.00%						
15	325 Electric Pumping Equipment	2.86%						
16	328 Gas Engine Equipment	5.88%						
17	Subtotal Pumping Plant	4.00%						
18	Water Treatment Plant							
19	330 Water Treatment Plant Land							
20	331 Water Treatment Structures & Improvements	0.00%						
21	332 Water Treatment Equipment	2.50%						
22	Subtotal Water Treatment Plant	2.86%						
23	Transmission & Distribution Plant							
24	340 Transmission and Distribution Land							
25	342 Storage Tanks	0.00%						
26	343 Transmission & Distribution Mains	2.00%						
27	344 Fire Sprinkler Taps	1.79%						
28	345 Services	2.00%						
29	346 Meters	2.38%						
30	348 Hydrants	4.55%						
31	Subtotal Transmission & Distribution Plant	1.82%						
32	General Plant							
33	389 General Plant Land							
34	390 General Plant Structures	0.00%						
35	390.1 Leasehold Improvements	2.50%						
36	391 Office Furniture & Equipment	note_2						
37	393 Warehouse Equipment	6.67%						
38	394 Tools, Shop & Garage Equipment	5.00%						
39	395 Laboratory Equipment	4.00%						
40	396 Power Operated Equipment	5.00%						
41	397 Communication Equipment	6.67%						
42	398 Miscellaneous Equipment	6.67%						
43	Subtotal General Plant	3.33%						
44	Total Depreciation Expense - Utility Plant							
45	45							
46	46							
47	Net Regulatory Assets/(Liabilities) (Sch. B-2 Rebuttal Appendix.)							
48	Less: Contributions in Aid of Construction							
49								
50	Total Increase/(Decrease) in Depreciation & Amortization Expense - Rebuttal	2.00%						
51								
52								
53	note_1 Acct. 302 - Franchises amortized over 25 years. Acct. 303 - Other intangibles amortized over 15 & 20 Years.							
54	Acct. 310.4 - Wells - Other amortized over 24 years. Accumulated Amortization booked to Acct. 111 - Amort. Of Ltd. Term Investments.							
55	note_2 Acct. 390.1 - Leasehold Improvements amortized over the remaining life of the associated lease.							

		SaddleBrooke Ranch						
Line No.	Acct. No.	[A]	[B]	[C]	[D]	[E]	[F]	[G]
		Depreciation Rate	Rebuttal Rate Base Adjustments - Direct Plant	Rebuttal Rate Base Adjustments - P.T.Y.P.	Increase / (Decrease) Depr. Exp.	Increase / (Decrease) Phoenix Office (3-factor Alloc.) 0.0015	Increase / (Decrease) Meter Shop (3-factor Alloc.) 0.0015	Total Increase / (Decrease) [C + D + E + F]
1	Intangible Plant	0.00%						
2	301 Organization	note_1			\$ -	\$ -	\$ -	\$ -
3	302 Franchises	note_1						
4	303 Other Intangibles							
5	Subtotal Intangible Plant		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6	Source of Supply Plant							
7	310.1 Water Rights	0.00%						
8	310.3 Other Source of Supply Land	0.00%						
9	310.4 Wells - Other	note_1						
10	314 Wells	3.13%						
11	Subtotal Source of Supply Plant		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
12	Pumping Plant							
13	320 Pumping Plant Land							
14	321 Pumping Plant Structures & Improvements	0.00%						
15	325 Electric Pumping Equipment	2.86%						
16	328 Gas Engine Equipment	5.88%						
17	Subtotal Pumping Plant	4.00%	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
18	Water Treatment Plant							
19	330 Water Treatment Plant Land							
20	331 Water Treatment Structures & Improvements	0.00%						
21	332 Water Treatment Equipment	2.50%						
22	Subtotal Water Treatment Plant	2.86%	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
23	Transmission & Distribution Plant							
24	340 Transmission and Distribution Land							
25	342 Storage Tanks	0.00%						
26	343 Transmission & Distribution Mains	2.00%						
27	344 Fire Sprinkler Taps	1.79%						
28	345 Services	2.00%						
29	346 Meters	2.38%						
30	348 Hydrants	4.55%						
31	Subtotal Transmission & Distribution Plant	1.82%	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
32	General Plant							
33	389 General Plant Land							
34	390 General Plant Structures	0.00%						
35	390.1 Leasehold Improvements	2.50%						
36	391 Office Furniture & Equipment	note_2						
37	393 Warehouse Equipment	6.67%						
38	394 Tools, Shop & Garage Equipment	5.00%						
39	395 Laboratory Equipment	4.00%						
40	396 Power Operated Equipment	5.00%				(2)		(2)
41	397 Communication Equipment	6.67%						
42	398 Miscellaneous Equipment	6.67%						
43	Subtotal General Plant	3.33%	\$ -	\$ -	\$ -	2	3	3
44	Total Depreciation Expense - Utility Plant		\$ -	\$ -	\$ -	2	\$ -	2
45	Net Regulatory Assets/(Liabilities) (Sch. B-2 Rebuttal Appndx.)		\$ -	\$ -	\$ -	2	\$ -	2
46	Less: Contributions in Aid of Construction							
47	Total Increase/(Decrease) in Depreciation & Amortization Expense - Rebuttal	2.00%						
48								
49								
50								
51								
52								
53	note_1 Acct. 302 - Franchises amortized over 25 years. Acct. 303 - Other intangibles amortized over 15 & 20 Years.							
54	Acct. 310.4 - Wells - Other amortized over 24 years. Accumulated Amortization booked to Acct. 111 - Amort. Of Ltd. Term Investments.							
55	note_2 Acct. 390.1 - Leasehold Improvements amortized over the remaining life of the associated lease.							

		Winkelman						
[A]	[B]	[C]	[D]	[E]	[F]	[G]		
Depreciation Rate	Rebuttal Rate Base Adjustments - Direct Plant	Rebuttal Rate Base Adjustments - P.T.Y.P.	Increase / (Decrease) Depr. Exp.	Increase / (Decrease) Phoenix Office (3-factor Alloc.) 0.0019	Increase / (Decrease) Meter Shop (3-factor Alloc.) 0.0019	Total Increase / (Decrease) [C + D + E + F]		
0.00% note_1	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		
0.00% note_1	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		
0.00% note_1	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		
3.13%	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		
0.00%	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		
2.86%	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		
5.88%	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		
4.00%	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		
0.00%	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		
2.50%	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		
2.86%	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		
0.00%	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		
2.00%	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		
1.79%	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		
2.00%	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		
2.38%	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		
4.55%	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		
1.82%	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		
0.00%	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		
2.50% note_2	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		
6.67%	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		
5.00%	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		
4.00%	\$ -	\$ -	\$ -	(2)	\$ -	(2)		
5.00%	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		
6.67%	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		
6.67%	\$ -	\$ -	\$ -	4	\$ -	4		
3.33%	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		
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		Phoenix Office			
		[A]	[B]	[C]	[D]
Line No.	Acct. No.	Depreciation Rate	Rebuttal Rate Base Adjustments - Direct Plant	Rebuttal Rate Base Adjustments - P.T.Y.P.	Increase / (Decrease) Depr. Exp.
1	Intangible Plant				
2	301 Organization	0.00%		\$ -	\$ -
3	302 Franchises	note_1		-	-
4	303 Other Intangibles	note_1		-	-
5	Subtotal Intangible Plant		\$ -	\$ -	\$ -
6	Source of Supply Plant				
7	310.1 Water Rights	0.00%		-	-
8	310.3 Other Source of Supply Land	0.00%		-	-
9	310.4 Wells - Other	note_1		-	-
10	314 Wells	3.13%		-	-
11	Subtotal Source of Supply Plant		\$ -	\$ -	\$ -
12	Pumping Plant				
13	320 Pumping Plant Land	0.00%		-	-
14	321 Pumping Plant Structures & Improvements	2.86%		-	-
15	325 Electric Pumping Equipment	5.88%		-	-
16	328 Gas Engine Equipment	4.00%		-	-
17	Subtotal Pumping Plant		\$ -	\$ -	\$ -
18	Water Treatment Plant				
19	330 Water Treatment Plant Land	0.00%		-	-
20	331 Water Treatment Structures & Improvements	2.50%		-	-
21	332 Water Treatment Equipment	2.86%		-	-
22	Subtotal Water Treatment Plant		\$ -	\$ -	\$ -
23	Transmission & Distribution Plant				
24	340 Transmission and Distribution Land	0.00%		-	-
25	342 Storage Tanks	2.00%		-	-
26	343 Transmission & Distribution Mains	1.79%		-	-
27	344 Fire Sprinkler Taps	2.00%		-	-
28	345 Services	2.38%		-	-
29	346 Meters	4.55%		-	-
30	348 Hydrants	1.82%		-	-
31	Subtotal Transmission & Distribution Plant		\$ -	\$ -	\$ -
32	General Plant				
33	389 General Plant Land	0.00%		-	-
34	390 General Plant Structures	2.50%		-	-
35	390.1 Leasehold Improvements	note_2		-	-
36	391 Office Furniture & Equipment	6.67%		-	-
37	393 Warehouse Equipment	5.00%		-	-
38	394 Tools, Shop & Garage Equipment	4.00%		(25,564)	(1,023)
39	395 Laboratory Equipment	5.00%		-	-
40	396 Power Operated Equipment	6.67%		-	-
41	397 Communication Equipment	6.67%		31,727	2,116
42	398 Miscellaneous Equipment	3.33%		-	-
43	Subtotal General Plant		\$ -	\$ 6,163	\$ 1,094
44	Total Depreciation Expense - Utility Plant		\$ -	\$ 6,163	\$ 1,094
45	Net Regulatory Assets/(Liabilities) (Sch. B-2 Rebuttal Apprx.)				-
46	Total Increase/(Decrease) in Depreciation & Amortization Expense - Rebuttal				\$ 1,094

note\_1 Acct. 302 - Franchises amortized over 25 years. Acct. 303 - Other intangibles amortized over 15 & 20 Years.  
Acct. 310.4 - Wells - Other amortized over 24 years. Accumulated Amortization booked to Acct. 111 - Amort. Of Ltd. Term Investments.  
note\_2 Acct. 390.1 - Leasehold Improvements amortized over the remaining life of the associated lease.

		Meter Shop			
		[A]	[B]	[C]	[D]
Line No.	Acct. No.	Depreciation Rate	Rebuttal Rate Base Adjustments - Direct Plant	Rebuttal Rate Base Adjustments - P.T.Y.P.	Increase / (Decrease) Depr. Exp.
1	Intangible Plant				
2	301 Organization	0.00%			
3	302 Franchises	note_1			\$
4	303 Other Intangibles	note_1			
5	Subtotal Intangible Plant				
6	Source of Supply Plant				
7	310.1 Water Rights	0.00%			
8	310.3 Other Source of Supply Land	0.00%			
9	310.4 Wells - Other	note_1			
10	314 Wells	3.13%			
11	Subtotal Source of Supply Plant				
12	Pumping Plant				
13	320 Pumping Plant Land				
14	321 Pumping Plant Structures & Improvements	0.00%			
15	325 Electric Pumping Equipment	2.86%			
16	328 Gas Engine Equipment	5.88%			
17	Subtotal Pumping Plant	4.00%			
18	Water Treatment Plant				
19	330 Water Treatment Plant Land				
20	331 Water Treatment Structures & Improvements	0.00%			
21	332 Water Treatment Equipment	2.50%			
22	Subtotal Water Treatment Plant	2.86%			
23	Transmission & Distribution Plant				
24	340 Transmission and Distribution Land	0.00%			
25	342 Storage Tanks	2.00%			
26	343 Transmission & Distribution Mains	1.79%			
27	344 Fire Sprinkler Taps	2.00%			
28	345 Services	2.38%			
29	346 Meters	4.55%			
30	348 Hydrants	1.82%			
31	Subtotal Transmission & Distribution Plant				
32	General Plant				
33	389 General Plant Land	0.00%			
34	390 General Plant Structures	2.50%			
35	390.1 Leasehold Improvements	note_2			
36	391 Office Furniture & Equipment	6.67%			
37	393 Warehouse Equipment	5.00%			
38	394 Tools, Shop & Garage Equipment	4.00%			
39	395 Laboratory Equipment	5.00%			
40	396 Power Operated Equipment	6.67%			
41	397 Communication Equipment	6.67%			
42	398 Miscellaneous Equipment	3.33%			
43	Subtotal General Plant				
44					
45	Total Depreciation Expense - Utility Plant				
46	Net Regulatory Assets/(Liabilities) (Sch. B-2 Rebuttal Appdx.)				
47					
48	Total Increase/(Decrease) in Depreciation & Amortization Expense - Rebuttal				
49					
50					
51					
52					
53	note_1 Acct. 302 - Franchises amortized over 25 years. Acct. 303 - Other intangibles amortized over 15 & 20 Years.				
54	Acct. 310.4 - Wells - Other amortized over 24 years. Accumulated Amortization booked to Acct. 111 - Amort. Of Ltd. Term Investments.				
55	note_2 Acct. 390.1 - Leasehold Improvements amortized over the remaining life of the associated lease.				



**ARIZONA WATER COMPANY**

Test Year Ended December 31, 2010

Rebuttal Income Statement Adjustment IS-7

Adjust Synchronized Interest to Reflect Rebuttal Rate Base Adjustments

Exhibit  
Schedule C-2 Rebuttal Appendix  
Page 14 of 20  
Witness: Reiker

Eastern Group - Synchronized Interest											
Line No.	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]	[K]
	Rebuttal Orig. Cost Rate Base Sch. B-1 Ln. 23	Weighted Cost of Long- Term Debt Sch. D-1	Synchronized Interest - Long-Term Debt	Adjusted T.Y. Long-Term Interest - As Filed	Increase / (Decrease) Long-Term Interest Exp.	Weighted Cost of Short- Term Debt Sch. D-1	Synchronized Interest - Short-Term Debt	Adjusted T.Y. Short-Term Interest - As Filed	Increase / (Decrease) Short-Term Interest Exp.	Test Year Other Interest - As Filed	Increase / (Decrease) Other Interest Exp.
1	System										
2											
3	Eastern Group										
4	Supersition	\$ 50,432,117	3.35%	\$ 1,692,249	\$ (4,771)	0.00%	\$ -	\$ -	\$ -	\$ -	\$ -
5	Cochise	8,425,690	3.35%	286,114	(4,188)	0.00%	-	-	-	-	-
6	San Manuel	2,014,751	3.35%	67,481	(67)	0.00%	-	-	-	-	-
7	Oracle	2,497,996	3.35%	82,653	931	0.00%	-	-	-	-	-
8	SaddleBrooke Ranch	-	3.35%	(4,169)	4,169	0.00%	-	-	-	-	-
9	Winkelman	306,390	3.35%	10,268	(16)	0.00%	-	-	-	-	-
10	Subtotal	\$ 63,676,945		\$ 2,134,597	\$ (3,941)		\$ -	\$ -	\$ -	\$ -	\$ -
11											
12	Total	\$ 63,676,945		\$ 2,134,597	\$ (3,941)		\$ -	\$ -	\$ -	\$ -	\$ -
13											
14											
15											

**ARIZONA WATER COMPANY**

Test Year Ended December 31, 2010

Rebuttal Income Statement Adjustment IS-8

Adjust Property Taxes

Line No.	Superstition		Cochise		San Manuel	
	(A)	(B) Adjusted - Rebuttal w/ Increase	(C) T.Y. Adjst'd - Rebuttal	(D) Adjusted - Rebuttal w/ Increase	(E) T.Y. Adjst'd - Rebuttal	(F) Adjusted - Rebuttal w/ Increase
1						
2	Adjusted Revenues - Rebuttal	\$ 15,056,166 \$ 15,056,166	\$ 3,303,549 \$ 3,303,549	\$ 3,303,549 \$ 3,303,549	\$ 947,528 \$ 947,528	\$ 947,528 \$ 947,528
3	Adjusted Revenues - Rebuttal	15,056,166 15,056,166	3,303,549 3,303,549	3,303,549 3,303,549	947,528 947,528	947,528 947,528
4	Adjusted Revenues - Rebuttal / Proposed Revenues	15,056,166 18,983,549	3,303,549 4,008,556	3,303,549 4,008,556	947,528 1,223,565	947,528 1,223,565
5						
6	Average Revenue	\$ 15,056,166 \$ 16,365,294	\$ 3,303,549 \$ 3,538,551	\$ 3,303,549 \$ 3,538,551	\$ 947,528 \$ 1,039,540	\$ 947,528 \$ 1,039,540
7						
8	Average Revenue Multiplied by 2	\$ 30,112,332 \$ 32,730,588	\$ 6,607,098 \$ 7,077,103	\$ 6,607,098 \$ 7,077,103	\$ 1,895,056 \$ 2,079,080	\$ 1,895,056 \$ 2,079,080
9						
10						
11						
12						
13						
14						
15	Deduct:					
16	Net Book Value of Transportation Equipment	\$ - \$ -	\$ - \$ -	\$ - \$ -	\$ - \$ -	\$ - \$ -
17						
18						
19	Full Cash Value	\$ 30,112,332 \$ 32,730,588	\$ 6,607,098 \$ 7,077,103	\$ 6,607,098 \$ 7,077,103	\$ 1,895,056 \$ 2,079,080	\$ 1,895,056 \$ 2,079,080
20						
21	Assessment Ratio	21.0% 21.0%	21.0% 21.0%	21.0% 21.0%	21.0% 21.0%	21.0% 21.0%
22						
23	Assessed Value	6,323,590 6,873,423	1,387,491 1,486,192	1,387,491 1,486,192	397,962 436,607	397,962 436,607
24						
25	Property Tax Rate <sup>1</sup>	13.40% 13.40%	10.17% 10.17%	10.17% 10.17%	12.37% 12.37%	12.37% 12.37%
26						
27	Property Tax	847,648 921,351	141,051 151,085	141,051 151,085	49,211 53,990	49,211 53,990
28						
29	Tax on Parcels	- -	- -	- -	- -	- -
30						
31	Total Property Taxes - Calculated	\$ 847,648 \$ 921,351	\$ 141,051 \$ 151,085	\$ 141,051 \$ 151,085	\$ 49,211 \$ 53,990	\$ 49,211 \$ 53,990
32						
33	Adjusted Property Taxes - As filed	747,264	137,972	137,972	48,221	48,221
34						
35	Increase / (Decrease) in Property Taxes - Rebuttal	\$ 100,384	\$ 3,079	\$ 3,079	\$ 980	\$ 980
36						
37	Adjusted Property Taxes - Rebuttal	847,648	141,051	141,051	49,211	49,211
38						
39	Inc. / (Dec.) in Property Taxes at Proposed Rates - Rebuttal	\$ 73,703	\$ 10,034	\$ 10,034	\$ 4,779	\$ 4,779
40						
41	As % of Change in Revenue Requirement	1.88%	1.42%	1.42%	1.73%	1.73%
42						
43						
44						
45						
46						
47						
48						
49						
50						
51						
52						
53						
54	<sup>1</sup> Property Tax rates updated to reflect current					
55	known & measurable rates.					

<sup>1</sup>Property Tax rates updated to reflect current known & measurable rates.

## ARIZONA WATER COMPANY

Test Year Ended December 31, 2010

Rebuttal Income Statement Adjustment (S-8 (continued))

Adjust Property Taxes

Schedule C-2 Rebuttal Appendix

Page 16 of 20

Witness: Reiker

Line No.	Oracle		SaddleBrooke Ranch		Winkelman	
	[A]	[B]	[C]	[D]	[E]	[F]
	T.Y. Adjst'd - Rebuttal	Adjusted - Rebuttal w/ Increase	T.Y. Adjst'd - Rebuttal	Adjusted - Rebuttal w/ Increase	T.Y. Adjst'd - Rebuttal	Adjusted - Rebuttal w/ Increase
1						
2	Adjusted Revenues - Rebuttal	990,109 \$	117,103 \$	117,103	102,098 \$	102,098
3	Adjusted Revenues - Rebuttal	990,109	117,103	117,103	102,098	102,098
4	Adjusted Revenues - Rebuttal / Proposed Revenues	990,109	117,103	244,673	102,098	133,953
5						
6	Average Revenue	990,109 \$	117,103 \$	159,626	102,098 \$	112,716
7						
8	Average Revenue Multiplied by 2	1,980,218 \$	234,205 \$	319,252	204,196 \$	225,433
9						
10						
11						
12						
13						
14						
15	Deduct:					
16	Net Book Value of Transportation Equipment	- \$	- \$	-	- \$	-
17						
18						
19	Full Cash Value	1,980,218 \$	234,205 \$	319,252	204,196 \$	225,433
20						
21	Assessment Ratio	21.0%	21.0%	21.0%	21.0%	21.0%
22						
23	Assessed Value	415,846	49,183	67,043	42,881	47,341
24						
25	Property Tax Rate <sup>1</sup>	10.30%	10.30%	10.30%	20.78%	20.78%
26						
27	Property Tax	42,848	5,068	6,908	8,910	9,837
28						
29	Tax on Parcels	-	-	-	-	-
30						
31	Total Property Taxes - Calculated	42,848 \$	5,068 \$	6,908	8,910 \$	9,837
32						
33	Adjusted Property Taxes - As filed	39,795	5,275		8,104	
34						
35	Increase / (Decrease) in Property Taxes - Rebuttal	3,053	(207)		806	
36						
37	Adjusted Property Taxes - Rebuttal			5,068		8,910
38						
39	Inc. / (Dec.) in Property Taxes at Proposed Rates - Rebuttal					927
40						
41	As % of Change in Revenue Requirement					2.91%
42						
43						
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53						

<sup>1</sup>Property Tax rates updated to reflect current known & measurable rates.

Supporting Schedules:

N:\2011\_Rate\_Case\Schedules\Eastern Group\2011 AWC Rate Case Model REBUTTAL SCHEDULES AWC EG 03.30.12 900am xlsx\2.1 Processing Date: 3/30/2012 11:09 AM

Recap Schedules:

**ARIZONA WATER COMPANY**

Test Year Ended December 31, 2010  
 Rebuttal Income Statement Adjustment (S-8 (continued))  
 Adjust Property Taxes

Schedule C-2 Rebuttal Appendix  
 Page 17 of 20  
 Witness: Reiker

Line No.	Eastern Group	
	[A]	[B]
	T.Y. Adjust' - Rebuttal	Adjusted - Rebuttal w/ Increase
2	Adjusted Revenues - Rebuttal	
3	Adjusted Revenues - Rebuttal	
4	Adjusted Revenues - Rebuttal / Proposed Revenues	
5		
6	Average Revenue	
7		
8	Average Revenue Multiplied by 2	
9		
10		
11		
12		
13		
14		
15	Deduct:	
16	Net Book Value of Transportation Equipment	
17		
18		
19	Full Cash Value	
20		
21	Assessment Ratio	
22		
23	Assessed Value	
24		
25	Property Tax Rate <sup>1</sup>	
26		
27	Property Tax	
28		
29	Tax on Parcels	
30		
31	Total Property Taxes - Calculated	
32		
33	Adjusted Property Taxes - As filed	
34		
35	Increase / (Decrease) in Property Taxes - Rebuttal	
36		
37	Adjusted Property Taxes - Rebuttal	
38		
39	Inc. / (Dec.) in Property Taxes at Proposed Rates - Rebuttal	
40		
41	As % of Change in Revenue Requirement	
42		
43		
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53		
54	<sup>1</sup> Property Tax rates updated to reflect current known & measurable rates.	
55		

Supporting Schedules:

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Recap Schedules:

## ARIZONA WATER COMPANY

Test Year Ended December 31, 2010

Rebuttal Income Statement Adjustment IS-9

Adjust Income Taxes to Reflect Adjusted Test Year Results &amp; Proposed Revenues

Exhibit  
Schedule C-2 Rebuttal Appendix  
Page 18 of 20  
Witness: Reiker

Line No.		Superstition		Cochise		San Manuel	
		[A] T.Y. Adjusted - Rebuttal	[B] Adjusted - Rebuttal w/ Increase	[C] T.Y. Adjusted - Rebuttal	[D] Adjusted - Rebuttal w/ Increase	[E] T.Y. Adjusted - Rebuttal	[F] Adjusted - Rebuttal w/ Increase
1							
2							
3	Operating Income Before Inc. Taxes	\$ 3,067,112	\$ 6,920,792	\$ 461,283	\$ 1,156,256	\$ 5,226	\$ 276,484
4	Interest Expense	1,687,478	1,687,478	281,927	281,927	67,414	67,414
5	Arizona Taxable Income (Ln. 3 + Ln. 4)	\$ 1,379,633	\$ 5,233,314	\$ 179,356	\$ 874,329	\$ (62,188)	\$ 209,070
6							
7	Less Arizona Income Tax (Ln. 5 X Ln. 7)	\$ 96,133	\$ 364,657	\$ 12,498	\$ 60,923	\$ (4,333)	\$ 14,568
8	Arizona Income Tax Rate = 6.968%						
9							
10	Federal Income Before Taxes (Ln. 5)	\$ 1,379,633	\$ 5,233,314	\$ 179,356	\$ 874,329	\$ (62,188)	\$ 209,070
11	Less Arizona Income Taxes (Ln. 7)	96,133	364,657	12,498	60,923	(4,333)	14,568
12	Federal Taxable Income (Ln. 10 - Ln. 11)	\$ 1,283,500	\$ 4,868,656	\$ 166,859	\$ 813,406	\$ (57,855)	\$ 194,502
13							
14	Federal Income Taxes:						
15	15% Bracket from \$1 to \$50,000	-	-	-	-	-	-
16	25% Bracket from \$50,001 to \$75,000	-	-	-	-	-	-
17	34% Bracket from \$75,001 to \$100,000	-	-	-	-	-	-
18	39% Bracket from \$100,001 to \$335,000	-	-	-	-	-	-
19	34% Bracket over \$335,000	436,390	1,655,343	56,732	276,558	(19,671)	66,131
20							
21	Federal Income Taxes:	\$ 436,390	\$ 1,655,343	\$ 56,732	\$ 276,558	\$ (19,671)	\$ 66,131
22							
23							
24	Total Income Tax (Ln. 11 + Ln. 21)	\$ 532,523	\$ 2,020,000	\$ 69,230	\$ 337,481	\$ (24,004)	\$ 80,699
25							
26	Tax Rate (Ln. 24 + Ln. 5)	38.60%	38.60%	38.60%	38.60%	38.60%	38.60%
27							
28	Effective Income Tax Rates						
29	State (Ln. 7 + Ln. 5)	6.97%	6.97%	6.97%	6.97%	6.97%	6.97%
30	Federal (Ln. 21 + Ln. 5)	31.63%	31.63%	31.63%	31.63%	31.63%	31.63%
31							
32							
33	Test Year Federal Income Taxes - As Filed (Sch. C-2, Ln. 30)	\$ 448,513		\$ 52,012		\$ (49,612)	
34	Increase / (Decrease) in Federal Income Taxes (Ln. 21 - Ln. 33)	\$ (12,123)		4,720		29,941	
35							
36	Test Year State Income Taxes - As Filed (Sch. C-2, Ln. 31)	\$ 98,803		\$ 11,458		\$ (10,929)	
37	Increase / (Decrease) in State Income Taxes (Ln. 11 - Ln. 36)	\$ (2,671)		1,040		6,596	
38							
39	Test Year Federal Income Taxes - Rebuttal	\$ 436,390		\$ 56,732		\$ (19,671)	
40	Increase / (Decrease) in Federal Income Taxes (Ln. 21 - Ln. 39)	\$ 1,218,953		\$ 219,826		\$ 85,801	
41							
42	Test Year State Income Taxes - Rebuttal	\$ 96,133		\$ 12,498		\$ (4,333)	
43	Increase / (Decrease) in State Income Taxes (Ln. 11 - Ln. 42)	\$ 268,524		\$ 48,426		\$ 18,901	
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**ARIZONA WATER COMPANY**

Test Year Ended December 31, 2010

Rebuttal Income Statement Adjustment IS-9 (continued)

Adjust Income Taxes to Reflect Adjusted Test Year Results & Proposed Revenues

Line No.		Oracle		SaddleBrooke Ranch		Winkelman	
		[A]	[B]	[C]	[D]	[E]	[F]
		T.Y. Adjusted - Rebuttal	Adjusted - Rebuttal w/ Increase	T.Y. Adjusted - Rebuttal	Adjusted - Rebuttal w/ Increase	T.Y. Adjusted - Rebuttal	Adjusted - Rebuttal w/ Increase
1							
2							
3	Operating Income Before Inc. Taxes	\$ 213,867	\$ 342,800	\$ (125,730)	\$ (0)	\$ 11,118	\$ 42,046
4	Interest Expense	83,584	83,584	-	-	10,252	10,252
5	Arizona Taxable Income (Ln. 3 + Ln. 4)	\$ 130,284	\$ 259,216	\$ (125,730)	\$ (0)	\$ 866	\$ 31,794
6							
7	Less Arizona Income Tax (Ln. 5 X Ln. 7)	\$ 9,078	\$ 18,062	\$ (8,761)	\$ (0)	\$ 60	\$ 2,215
8	Arizona Income Tax Rate = 6.968%						
9							
10	Federal Income Before Taxes (Ln. 5)	\$ 130,284	\$ 259,216	\$ (125,730)	\$ (0)	\$ 866	\$ 31,794
11	Less Arizona Income Taxes (Ln. 7)	9,078	18,062	(8,761)	(0)	60	2,215
12	Federal Taxable Income (Ln. 10 - Ln. 11)	\$ 121,205	\$ 241,154	\$ (116,969)	\$ (0)	\$ 806	\$ 29,579
13							
14	Federal Income Taxes:						
15	15% Bracket from \$1 to \$50,000	-	-	-	-	-	-
16	25% Bracket from \$50,001 to \$75,000	-	-	-	-	-	-
17	34% Bracket from \$75,001 to \$100,000	-	-	-	-	-	-
18	39% Bracket from \$100,001 to \$335,000	-	-	-	-	-	-
19	34% Bracket over \$335,000	41,210	81,992	(39,770)	(0)	274	10,057
20							
21	Federal Income Taxes:	\$ 41,210	\$ 81,992	\$ (39,770)	\$ (0)	\$ 274	\$ 10,057
22							
23							
24	Total Income Tax (Ln. 11 + Ln. 21)	\$ 50,288	\$ 100,054	\$ (48,530)	\$ (0)	\$ 334	\$ 12,272
25							
26	Tax Rate (Ln. 24 + Ln. 5)	38.60%	38.60%	38.60%	38.60%	38.60%	38.60%
27							
28	Effective Income Tax Rates						
29	State (Ln. 7 + Ln. 5)	6.97%	6.97%	6.97%	6.97%	6.97%	6.97%
30	Federal (Ln. 21 + Ln. 5)	31.63%	31.63%	31.63%	31.63%	31.63%	31.63%
31							
32							
33	Test Year Federal Income Taxes - As Filed (Sch. C-2, Ln. 30)	\$ 41,571		\$ (38,543)		\$ 445	
34	Increase / (Decrease) in Federal Income Taxes (Ln. 21 - Ln. 33)	\$ (361)		\$ (1,226)		\$ (171)	
35							
36	Test Year State Income Taxes - As filed (Sch. C-2, Ln. 31)	\$ 9,158		\$ (8,491)		\$ 98	
37	Increase / (Decrease) in State Income Taxes (Ln. 11 - Ln. 36)	\$ (79)		\$ (270)		\$ (38)	
38							
39	Test Year Federal Income Taxes - Rebuttal		\$ 41,210		\$ (39,770)		\$ 274
40	Increase / (Decrease) in Federal Income Taxes (Ln. 21 - Ln. 39)		\$ 40,782		\$ 39,770		\$ 9,783
41							
42	Test Year State Income Taxes - Rebuttal		\$ 9,078		\$ (8,761)		\$ 60
43	Increase / (Decrease) in State Income Taxes (Ln. 11 - Ln. 42)		\$ 8,984		\$ 8,761		\$ 2,155
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**ARIZONA WATER COMPANY**

Test Year Ended December 31, 2010

Rebuttal Income Statement Adjustment (S-9 (continued))

Adjust Income Taxes to Reflect Adjusted Test Year Results & Proposed Revenues

Line No.		Eastern Group	
		[A]	[B]
		T.Y. Adjusted - Rebuttal	Adjusted - Rebuttal w/ Increase
1			
2			
3	Operating Income Before Inc. Taxes	\$ 3,632,876	\$ 8,738,378
4	Interest Expense	2,130,656	2,130,656
5	Arizona Taxable Income (Ln. 3 + Ln. 4)	\$ 1,502,220	\$ 6,607,722
6			
7	Less Arizona Income Tax (Ln. 5 X Ln. 7)	\$ 104,675	\$ 460,426
8	Arizona Income Tax Rate = 6.968%		
9			
10	Federal Income Before Taxes (Ln. 5)	\$ 1,502,220	\$ 6,607,722
11	Less Arizona Income Taxes (Ln. 7)	104,675	460,426
12	Federal Taxable Income (Ln. 10 - Ln. 11)	\$ 1,397,546	\$ 6,147,296
13			
14	Federal Income Taxes:		
15	15% Bracket from \$1 to \$50,000	-	-
16	25% Bracket from \$50,001 to \$75,000	-	-
17	34% Bracket from \$75,001 to \$100,000	-	-
18	39% Bracket from \$100,001 to \$335,000	-	-
19	34% Bracket over \$335,000	475,165	2,090,081
20			
21	Federal Income Taxes:	\$ 475,165	\$ 2,090,081
22			
23			
24	Total Income Tax (Ln. 11 + Ln. 21)	\$ 579,840	\$ 2,550,507
25			
26	Tax Rate (Ln. 24 ÷ Ln. 5)	38.60%	38.60%
27			
28	Effective Income Tax Rates		
29	State (Ln. 7 ÷ Ln. 5)	6.97%	6.97%
30	Federal (Ln. 21 ÷ Ln. 5)	31.63%	31.63%
31			
32			
33	Test Year Federal Income Taxes - As Filed (Sch. C-2, Ln. 30)	\$ 454,385	
34	Increase / (Decrease) in Federal Income Taxes (Ln. 21 - Ln. 33)	\$ 20,780	
35			
36	Test Year State Income Taxes - As filed (Sch. C-2, Ln. 31)	\$ 100,097	
37	Increase / (Decrease) in State Income Taxes (Ln. 11 - Ln. 36)	\$ 4,578	
38			
39	Test Year Federal Income Taxes - Rebuttal	\$ 475,165	
40	Increase / (Decrease) in Federal Income Taxes (Ln. 21 - Ln. 39)	\$ 1,614,915	
41			
42	Test Year State Income Taxes - Rebuttal	\$ 104,675	
43	Increase / (Decrease) in State Income Taxes (Ln. 11 - Ln. 42)	\$ 355,751	
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## ARIZONA WATER COMPANY

Test Year Ended December 31, 2010

Computation of Gross Revenue Conversion Factor

Eastern Group  
[A]Percentage of  
Incremental  
Gross Revenues

31.63%

6.97%

38.60%

61.40%

1.79%

1.10%

39.70%

60.30%

Line  
No.Description

1

Federal Income Taxes

2

State Income Taxes

3

Total Federal &amp; State Income Tax Percentage

4

Operating Income % = 100% - Tax Percentage

5

Property Tax Factor (Sch. C-2 Appdx.)

6

Effective Property Tax Factor (Ln. 8 x Ln. 10)

7

Combined Federal &amp; State Income &amp; Property Tax Rate

8

Operating Income % = 100% - Tax Percentage

9

1

= Gross Revenue Conversion Factor

10

Operating Income %

11

1.6584

Supporting Schedules:

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Processing Date: 3/30/2012 11:09 AMRecap Schedules:  
A-1 Rebuttal



**ARIZONA WATER COMPANY**

Test Year Ended December 31, 2010

Computation of Gross Revenue Conversion Factor

Superstition  
(Apache Junction,  
Superior, Miami)  
[A]

Percentage of  
Incremental  
Gross Revenues

31.63%  
6.97%  
38.60%  
61.40%  
1.88%  
1.15%  
39.75%  
60.25%

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Description

Federal Income Taxes

State Income Taxes

Total Federal & State Income Tax Percentage

Operating Income % = 100% - Tax Percentage

Property Tax Factor (Sch. C-2 Appdx.)

Effective Property Tax Factor (Ln. 8 x Ln. 10)

Combined Federal & State Income & Property Tax Rate

Operating Income % = 100% - Tax Percentage

$\frac{1}{\text{Operating Income \%}} = \text{Gross Revenue Conversion Factor}$

1.6598

Cochise  
(Bisbee,  
Sierra Vista)  
[A]

Percentage of  
Incremental  
Gross Revenues

Line No.	Description	
1		
2	Federal Income Taxes	31.63%
3		
4	State Income Taxes	6.97%
5		
6	Total Federal & State Income Tax Percentage	38.60%
7		
8	Operating Income % = 100% - Tax Percentage	61.40%
9		
10	Property Tax Factor (Sch. C-2 Appdx.)	1.42%
11		
12	Effective Property Tax Factor (Ln. 8 x Ln. 10)	0.87%
13		
14	Combined Federal & State Income & Property Tax Rate	39.47%
15		
16	Operating Income % = 100% - Tax Percentage	60.53%
17		
18		
19		
20		
21		
22		
23	$\frac{1}{\text{Operating Income \%}}$ = Gross Revenue Conversion Factor	1.6521
24		
25		
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## ARIZONA WATER COMPANY

Test Year Ended December 31, 2010

Computation of Gross Revenue Conversion Factor

San Manuel  
[A]Percentage of  
Incremental  
Gross Revenues

Line No.	Description	
1		
2	Federal Income Taxes	31.63%
3		
4	State Income Taxes	6.97%
5		
6	Total Federal & State Income Tax Percentage	38.60%
7		
8	Operating Income % = 100% - Tax Percentage	61.40%
9		
10	Property Tax Factor (Sch. C-2 Appdx.)	1.73%
11		
12	Effective Property Tax Factor (Ln. 8 x Ln. 10)	1.06%
13		
14	Combined Federal & State Income & Property Tax Rate	39.66%
15		
16	Operating Income % = 100% - Tax Percentage	60.34%
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$$\frac{1}{\text{Operating Income \%}} = \text{Gross Revenue Conversion Factor}$$

1.6573

Supporting Schedules:

N:\2011\_Rate\_Case\Schedules\Eastern Group\2011 AWC Rate Case Model REBUTTAL SCHEDULES AWC EG 03.30.12 900am.xlsxC3  
Processing Date: J/30/2012 11:09 AMRecap Schedules:  
A-1 Rebuttal

Oracle  
[A]

Percentage of  
Incremental  
Gross Revenues

31.63%  
6.97%  
38.60%  
61.40%  
1.44%  
0.89%  
39.48%  
60.52%

Line No.	Description	
1		
2	Federal Income Taxes	31.63%
3		
4	State Income Taxes	6.97%
5		
6	Total Federal & State Income Tax Percentage	38.60%
7		
8	Operating Income % = 100% - Tax Percentage	61.40%
9		
10	Property Tax Factor (Sch. C-2 Appdx.)	1.44%
11		
12	Effective Property Tax Factor (Ln. 8 x Ln. 10)	0.89%
13		
14	Combined Federal & State Income & Property Tax Rate	39.48%
15		
16	Operating Income % = 100% - Tax Percentage	60.52%
17		
18		
19		
20		
21		
22		
23	$\frac{1}{\text{Operating Income \%}} = \text{Gross Revenue Conversion Factor}$	1.6525
24		
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SaddleBrooke Ranch	
[A]	
Line No.	Description
1	
2	Federal Income Taxes
3	
4	State Income Taxes
5	
6	Total Federal & State Income Tax Percentage
7	
8	Operating Income % = 100% - Tax Percentage
9	
10	Property Tax Factor (Sch. C-2 Appdx.)
11	
12	Effective Property Tax Factor (Ln. 8 x Ln. 10)
13	
14	Combined Federal & State Income & Property Tax Rate
15	
16	Operating Income % = 100% - Tax Percentage
17	
18	
19	
20	
21	
22	
23	1 = Gross Revenue Conversion Factor
24	Operating Income %
25	
26	
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Winkelman  
[A]

Percentage of  
Incremental  
Gross Revenues

Line No.	Description	
1		
2	Federal Income Taxes	31.63%
3		
4	State Income Taxes	6.97%
5		
6	Total Federal & State Income Tax Percentage	38.60%
7		
8	Operating Income % = 100% - Tax Percentage	61.40%
9		
10	Property Tax Factor (Sch. C-2 Appdx.)	2.91%
11		
12	Effective Property Tax Factor (Ln. 8 x Ln. 10)	1.79%
13		
14	Combined Federal & State Income & Property Tax Rate	40.39%
15		
16	Operating Income % = 100% - Tax Percentage	59.61%
17		
18		
19		
20		
21		
22		
23	$\frac{1}{\text{Operating Income \%}}$ = Gross Revenue Conversion Factor	1.6774
24		
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55		

Eastern Group				
Line No.	Description	[A]	[B]	[C] [D]
		End of Test Year - Actual		
		Dollar Amount <sup>1</sup>	Percent of Total	Rate of Return Weighted Return
1				
2	Short-Term Debt	\$ -	0.00%	0.00%
3				
4	Long-Term Debt	29,895,000	49.03%	6.82% 3.35%
5				
6	Common Equity	31,080,969	50.97%	6.33% 3.22%
7				
8	Totals	\$ 60,975,969	100.00%	6.57%
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21	Short-Term Debt	\$ -	0.00%	0.00%
22				
23	Long-Term Debt	29,895,000	49.03%	6.82% 3.35%
24				
25	Common Equity	31,080,969	50.97%	12.50% 6.37%
26				
27	Totals	\$ 60,975,969	100.00%	9.72%
28				
29				
30				
31				
32				
33				
34				
35				
36				
37				
38	Short-Term Debt	\$ -	0.00%	0.00%
39				
40	Long-Term Debt	29,895,000	49.03%	6.82% 3.35%
41				
42	Common Equity	31,080,969	50.97%	12.50% 6.37%
43				
44	Totals	\$ 60,975,969	100.00%	9.72%
45				
46				
47				
48				
49				
50				
51				
52				
53				
54				
55				

<sup>1</sup>Allocated based on  
3-factor methodology

Supporting Schedules:

**ARIZONA WATER COMPANY**

Test Year Ended December 31, 2010  
Rate of Return by Customer Class - Present Rates

Line No.		Eastern Group					Direct Private Fire
		[A] Adjstd' Total - Rebuttal	[B] Residential	[C] Commercial	[D] Industrial	[E] Other	
1							
2	Operating Revenues						
3	Water Revenues (Sch. H-1)	\$ 19,717,550	\$ 15,371,629	\$ 3,890,028	\$ 76,580	\$ 310,817	\$ 68,497
4	Miscellaneous Revenues <sup>1</sup> (Sch. H-1)	799,406	633,122	149,475	3,646	10,342	2,820
5	Total Operating Revenues	\$ 20,516,956	\$ 16,004,752	\$ 4,039,503	\$ 80,226	\$ 321,159	\$ 71,317
6							
7	Operating Expenses						
8	Operations & Maintenance Expense	11,964,006	10,010,679	1,791,757	33,869	127,524	177
9	Depreciation & Amortization Expense	3,567,635	3,005,439	489,539	7,276	37,166	28,214
10	Income Taxes	579,840	45,542	468,457	11,216	44,502	10,123
11	Property Taxes	1,094,736	856,905	213,298	4,568	16,186	3,779
12	Other Taxes	257,300	215,902	38,051	707	2,636	4
13	Total Operating Expenses	\$ 17,463,517	\$ 14,134,467	\$ 3,001,104	\$ 57,636	\$ 228,013	\$ 42,298
14							
15	Taxable Income	1,506,505	121,929	1,213,834	29,059	115,268	26,415
16							
17	Net Operating Income	\$ 3,053,439	\$ 1,870,285	\$ 1,038,400	\$ 22,590	\$ 93,145	\$ 29,019
18							
19	Interest Expense	2,126,774	1,793,898	293,023	4,746	22,380	12,727
20							
21							
22							
23	Rate Base	\$ 63,560,931	\$ 53,612,578	\$ 8,757,309	\$ 141,851	\$ 668,836	\$ 380,357
24							
25	Rate of Return (Ln. 17 + Ln. 23)	4.80%	3.49%	11.86%	15.93%	13.93%	7.63%
26							
27	Required Rate of Return (Sch. A-1, Ln. 12)	9.72%	9.72%	9.72%	9.72%	9.72%	9.72%
28							
29	Required Operating Income (Ln. 23 X Ln. 27)	\$ 6,176,597	\$ 5,209,856	\$ 851,000	\$ 13,785	\$ 64,995	\$ 36,962
30							
31	Operating Income Deficiency (Ln. 29 - Ln. 17)	\$ 3,123,159	\$ 3,339,571	\$ (187,399)	\$ (8,805)	\$ (28,151)	\$ 7,942
32							
33	Additional Taxes at Proposed Rates						
34	(Sch. G-4, Lns. 42 + 48 - 18 + 24)	\$ 2,063,836	\$ 1,648,042	\$ 381,022	\$ 3,729	\$ 29,786	\$ 2,756
35							
36	Required Increase in Gross Revenues (Ln. 31 + Ln. 34)	\$ 5,188,493	\$ 4,987,613	\$ 193,622	\$ (5,077)	\$ 1,635	\$ 10,698
37							
38	% Required Increase in Gross Revenues (Ln. 36 + Ln. 5)	25.29%	31.16%	4.79%	-6.33%	0.51%	15.00%
39							
40	Gross Revenue Requirement (Ln. 5 + Ln. 36)	\$ 25,705,449	\$ 20,992,365	\$ 4,233,126	\$ 75,149	\$ 322,794	\$ 82,015
41							
42	Less: Miscellaneous Revenues at Proposed Rates	\$ (975,534)	\$ (775,579)	\$ (180,055)	\$ (3,868)	\$ (13,081)	\$ (2,951)
43							
44	Revenue Requirement - Metered Water Revenues	\$ 24,729,915	\$ 20,216,786	\$ 4,053,071	\$ 71,282	\$ 309,713	\$ 79,064
45							
46							
47							
48	% of Revenues Required from Fixed Charge	48%	50%	39%	32%	38%	100%
49	% of Revenues Required from Commodity Charge	52%	50%	61%	68%	62%	0%
50							
51							
52							
53							
54	<sup>1</sup> Allocated to customer classes based on						
55	percentage of total water revenues						

Supporting Schedules:  
G-3 Rebuttal, G-4 Rebuttal, H-1 Rebuttal



Eastern Group													
Line No.	[A]		[B]		[C]		[D]		[E]		[F]		[G]
	Commodity		Demand		Customer		Direct Private Fire	Total Cost of Service			Monthly Fixed 5/g	Commodity Per M Gal	
1		M Gal		equiv. meter	bill								
2	Unit	3,622,888		42,663	398,924								
3	Total Units												
4	Cost of Service	\$ 6,138,085	\$	14,219,477	\$ 5,264,445	\$	n/a	\$ 25,703,951					
5	Cost per Unit	\$ 1.69	\$	333.29	\$ 13.20		n/a						
6													
7													
8	Residential												
9	Units of Service	2,779,660		35,590	379,032		n/a						
10	Cost of Service	\$ 4,610,365	\$	11,601,263	\$ 4,779,351	\$	n/a	\$ 20,990,979			\$ 26.19	\$ 3.7454	
11													
12	Commercial												
13	Units of Service	769,509		6,469	19,380		n/a						
14	Cost of Service	\$ 1,390,689	\$	2,388,098	\$ 454,289	\$	n/a	\$ 4,233,076			\$ 38.82	\$ 3.3589	
15													
16	Industrial												
17	Units of Service	20,509		90	144		n/a						
18	Cost of Service	\$ 33,485	\$	35,868	\$ 5,796	\$	n/a	\$ 75,149			\$ 56.85	\$ 2.5072	
19													
20	Other												
21	Units of Service	53,210		515	368		n/a						
22	Cost of Service	\$ 103,546	\$	194,247	\$ 25,009	\$	n/a	\$ 322,802			\$ 83.68	\$ 3.7713	
23													
24	Direct Private Fire												
25	Cost of Service	n/a		n/a	n/a	\$	81,944	\$ 81,944					
26													
27													
28	Total System Cost of Service	\$ 6,138,085	\$	14,219,477	\$ 5,264,445	\$	81,944	\$ 25,703,951					

**ARIZONA WATER COMPANY**

Test Year Ended December 31, 2010  
Rate of Return by Customer Class - Present Rates

Exhibit  
Schedule G-1 Rebuttal  
Page 3 of 14  
Witness: Reiker

Line No.	Description	Superstition (Apache Junction, Superior, Miami)					Direct Private Fire
		[A]	[B]	[C]	[D]	[E]	
		Adjst'd Total - Rebuttal	Residential	Commercial	Industrial	Other	
1							
2	Operating Revenues						
3	Water Revenues (Sch. H-1)	\$ 14,331,107 \$	11,436,957 \$	2,606,590 \$	70,149 \$	166,217 \$	51,194
4	Miscellaneous Revenues <sup>1</sup> (Sch. H-1)	725,456	578,951	131,948	3,551	8,414	2,592
5	Total Operating Revenues	\$ 15,056,563 \$	12,015,908 \$	2,738,538 \$	73,700 \$	174,631 \$	53,786
6							
7	Operating Expenses						
8	Operations & Maintenance Expense	8,299,226	7,060,358	1,134,948	30,935	72,874	110
9	Depreciation & Amortization Expense	2,671,695	2,288,422	332,723	6,268	25,004	19,278
10	Income Taxes	532,523	157,489	336,829	10,617	18,756	8,831
11	Property Taxes	847,648	676,466	154,173	4,149	9,831	3,028
12	Other Taxes	170,486	145,036	23,314	635	1,497	2
13	Total Operating Expenses	\$ 12,521,578 \$	10,327,772 \$	1,981,987 \$	52,605 \$	127,964 \$	31,250
14							
15	Taxable Income	1,380,030	408,133	872,889	27,514	48,607	22,886
16							
17	Net Operating Income	\$ 2,534,985 \$	1,688,136 \$	756,552 \$	21,094 \$	46,667 \$	22,536
18							
19	Interest Expense	1,687,478	1,437,493	220,491	4,197	16,817	8,481
20							
21							
22	Rate Base	\$ 50,432,117 \$	42,961,020 \$	6,589,625 \$	125,438 \$	502,584 \$	253,449
23							
24	Rate of Return (Ln. 17 + Ln. 23)	5.03%	3.93%	11.48%	16.82%	9.29%	8.89%
25							
26	Required Rate of Return (Sch. A-1, Ln. 12)	9.72%	9.72%	9.72%	9.72%	9.72%	9.72%
27							
28	Required Operating Income (Ln. 23 X Ln. 27)	\$ 4,900,792 \$	4,174,780 \$	640,353 \$	12,190 \$	48,839 \$	24,629
29							
30	Operating Income Deficiency (Ln. 29 - Ln. 17)	\$ 2,365,806 \$	2,486,644 \$	(116,199) \$	(8,905) \$	2,172 \$	2,094
31							
32	Additional Taxes at Proposed Rates (Sch. G-4, Lns. 42 + 48 + 18 + 24)	\$ 1,561,180 \$	1,296,070 \$	240,802 \$	3,364 \$	19,773 \$	1,171
33							
34	Required Increase in Gross Revenues (Ln. 31 + Ln. 34)	\$ 3,926,987 \$	3,782,714 \$	124,604 \$	(5,541) \$	21,945 \$	3,265
35							
36	% Required Increase in Gross Revenues (Ln. 36 + Ln. 5)	26.08%	31.48%	4.55%	-7.52%	12.57%	6.07%
37							
38	Gross Revenue Requirement (Ln. 5 + Ln. 36)	\$ 18,983,549 \$	15,798,622 \$	2,863,142 \$	68,158 \$	196,576 \$	57,050
39							
40	Less: Miscellaneous Revenues at Proposed Rates	\$ (857,550) \$	(689,828) \$	(151,279) \$	(3,733) \$	(10,127) \$	(2,584)
41							
42	Revenue Requirement - Metered Water Revenues	\$ 18,125,999 \$	15,108,794 \$	2,711,864 \$	64,426 \$	186,449 \$	54,466
43							
44							
45							
46							
47							
48	% of Revenues Required from Fixed Charge	48%	50%	39%	30%	39%	100%
49	% of Revenues Required from Commodity Charge	52%	50%	61%	70%	61%	0%
50							
51							
52							
53							
54	<sup>1</sup> Allocated to customer classes based on percentage of total water revenues						
55							

<sup>1</sup>Allocated to customer classes based on percentage of total water revenues

Line No.	Supersition (Apache Junction, Superior, Miami)							
	[A]	[B]	[C]	[D]	[E]	[F]	[G]	
	Commodity	Demand	Customer	Direct Private Fire	Total Cost of Service	Monthly Fixed 5/8"	Commodity Per M Gal	
1								
2	Unit							
3	M Gal	equiv. meter	bill					
4	2,649,324	31,088	283,644	n/a				
5	\$ 4,459,700	\$ 10,724,211	\$ 3,742,588	\$ 57,050	\$ 18,983,549			
6	\$ 1.68	\$ 344.96	\$ 13.19	n/a				
7								
8	Residential							
9	Units of Service							
10	Cost of Service	2,075,778	271,896	n/a				
11		\$ 3,440,320	\$ 8,911,313	\$ 3,446,989	\$ 15,798,622	\$ 26.77	\$ 3.8039	
12	Commercial							
13	Units of Service							
14	Cost of Service	524,137	4,316	11,388				
15		\$ 932,164	\$ 1,653,085	\$ 277,894	\$ 2,863,142	\$ 40.36	\$ 3.3554	
16	Industrial							
17	Units of Service							
18	Cost of Service	19,641	72	108				
19		\$ 32,584	\$ 30,632	\$ 4,943	\$ 68,158	\$ 63.62	\$ 2.4388	
20	Other							
21	Units of Service							
22	Cost of Service	29,768	354	252				
23		\$ 54,632	\$ 129,181	\$ 12,763	\$ 196,576	\$ 65.87	\$ 4.0050	
24	Direct Private Fire							
25	Cost of Service	n/a	n/a	n/a	\$ 57,050			
26								
27								
28	Total System Cost of Service	\$ 4,459,700	\$ 10,724,211	\$ 3,742,588	\$ 57,050	\$ 18,983,549		

**ARIZONA WATER COMPANY**

Test Year Ended December 31, 2010  
Rate of Return by Customer Class - Present Rates

Exhibit  
Schedule G-1 Rebuttal  
Page 5 of 14  
Witness: Reiker

		Cochise (Bisbee, Sierra Vista)						
		[A]	[B]	[C]	[D]	[E]	[F]	
Line No.		Adjstd* Total - Rebuttal	Residential	Commercial	Industrial	Other	Direct Private Fire	
1								
2	Operating Revenues							
3	Water Revenues (Sch. H-1)	\$ 3,260,624	\$ 2,270,377	\$ 863,168	\$ 3,342	\$ 107,088	\$ 16,647	
4	Miscellaneous Revenues <sup>1</sup> (Sch. H-1)	42,877	29,855	11,351	44	1,408	219	
5	Total Operating Revenues	\$ 3,303,500	\$ 2,300,233	\$ 874,519	\$ 3,386	\$ 108,497	\$ 16,866	
6								
7	Operating Expenses							
8	Operations & Maintenance Expense	2,147,527	1,724,610	391,251	1,474	30,126	66	
9	Depreciation & Amortization Expense	496,103	398,859	82,721	503	5,461	8,559	
10	Income Taxes	69,230	(74,871)	117,727	360	24,820	1,193	
11	Property Taxes	141,051	98,214	37,340	145	4,633	720	
12	Other Taxes	57,585	46,244	10,491	40	808	2	
13	Total Operating Expenses	\$ 2,911,495	\$ 2,193,056	\$ 639,530	\$ 2,521	\$ 65,847	\$ 10,540	
14								
15	Taxable Income	179,308	(193,919)	304,920	933	64,284	3,090	
16								
17	Net Operating Income	\$ 392,005	\$ 107,176	\$ 234,989	\$ 865	\$ 42,649	\$ 6,326	
18								
19	Interest Expense	281,927	226,225	47,797	292	3,185	4,429	
20								
21								
22								
23	Rate Base	\$ 8,425,690	\$ 6,760,967	\$ 1,428,453	\$ 8,718	\$ 95,183	\$ 132,369	
24								
25	Rate of Return (Ln. 17 ÷ Ln. 23)	4.65%	1.59%	16.45%	9.92%	44.81%	4.78%	
26								
27	Required Rate of Return (Sch. A-1, Ln. 12)	9.72%	9.72%	9.72%	9.72%	9.72%	9.72%	
28								
29	Required Operating Income (Ln. 23 X Ln. 27)	\$ 818,775	\$ 657,004	\$ 138,811	\$ 847	\$ 9,250	\$ 12,863	
30								
31	Operating Income Deficiency (Ln. 29 - Ln. 17)	\$ 426,770	\$ 549,828	\$ (96,177)	\$ (18)	\$ (33,400)	\$ 6,537	
32								
33	Additional Taxes at Proposed Rates							
34	(Sch. G-4, Lns. 42 + 48 - 18 + 24)							
35								
36	Required Increase in Gross Revenues (Ln. 31 + Ln. 34)	\$ 705,055	\$ 764,266	\$ (36,349)	\$ 200	\$ (30,927)	\$ 7,865	
37								
38	% Required Increase in Gross Revenues (Ln. 36 ÷ Ln. 5)	21.34%	33.23%	-4.16%	5.90%	-28.51%	46.63%	
39								
40	Gross Revenue Requirement (Ln. 5 + Ln. 36)	\$ 4,008,556	\$ 3,064,498	\$ 838,170	\$ 3,586	\$ 77,570	\$ 24,731	
41								
42	Less: Miscellaneous Revenues at Proposed Rates	\$ (68,735)	\$ (48,725)	\$ (17,617)	\$ (68)	\$ (1,978)	\$ (347)	
43								
44	Revenue Requirement - Metered Water Revenues	\$ 3,939,821	\$ 3,015,773	\$ 820,553	\$ 3,518	\$ 75,591	\$ 24,384	
45								
46								
47								
48	% of Revenues Required from Fixed Charge	52%	55%	42%	54%	37%	100%	
49	% of Revenues Required from Commodity Charge	48%	45%	58%	46%	63%	0%	
50								
51								
52								
53								
54	<sup>1</sup> Allocated to customer classes based on							
55	percentage of total water revenues							

Supporting Schedules:  
G-3 Rebuttal, G-4 Rebuttal, H-1 Rebuttal

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Processing Date: 3/30/2012 11:09 AM

Recap Schedules:

Cochise (Bisbee, Sierra Vista)									
Line No.	[A]	[B]	[C]	[D]	[E]	[F]		[G]	
						Commodity		Commodity	
						Monthly	Fixed 5/8"	Per M.Gal	
1									
2	Unit								
3	Total Units								
4	Cost of Service								
5	Cost per Unit								
6									
7									
8	Residential								
9	Units of Service								
10	Cost of Service								
11									
12	Commercial								
13	Units of Service								
14	Cost of Service								
15									
16	Industrial								
17	Units of Service								
18	Cost of Service								
19									
20	Other								
21	Units of Service								
22	Cost of Service								
23									
24	Direct Private Fire								
25	Cost of Service								
26									
27									
28	Total System Cost of Service								
29									
30									
31									
32									
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49									
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51									
52									
53									
54									

**ARIZONA WATER COMPANY**

Test Year Ended December 31, 2010  
Rate of Return by Customer Class - Present Rates

Exhibit  
Schedule G-1 Rebuttal  
Page 7 of 14  
Witness: Reiker

		San Manuel					
		(A)	(B)	(C)	(D)	(E)	(F)
Line No.		Adjstd' Total - Rebuttal	Residential	Commercial	Industrial	Other	Direct Private Fire
1							
2	Operating Revenues						
3	Water Revenues (Sch. H-1)	\$ 932,277 \$	763,888 \$	159,464 \$	-	\$ 8,639 \$	287
4	Miscellaneous Revenues <sup>1</sup> (Sch. H-1)	15,328	12,559	2,622	-	142	5
5	Total Operating Revenues	\$ 947,605 \$	776,447 \$	162,085 \$	-	\$ 8,781 \$	292
6							
7	Operating Expenses						
8	Operations & Maintenance Expense	765,499	655,462	104,756	-	5,281	0
9	Depreciation & Amortization Expense	112,956	93,313	18,450	-	1,189	3
10	Income Taxes	(24,004)	(31,053)	6,556	-	388	105
11	Property Taxes	49,211	40,323	8,417	-	456	15
12	Other Taxes	14,635	12,532	2,003	-	101	0
13	Total Operating Expenses	\$ 918,298 \$	770,576 \$	140,183 \$	-	\$ 7,416 \$	123
14							
15	Taxable Income	(62,111)	(80,352)	16,964	-	1,004	272
16							
17	Net Operating Income	\$ 29,307 \$	5,871 \$	21,902 \$	-	\$ 1,366 \$	168
18							
19	Interest Expense	67,414	55,169	11,494	-	750	1
20							
21							
22							
23	Rate Base	\$ 2,014,751 \$	1,648,793 \$	343,516 \$	-	\$ 22,406 \$	36
24							
25	Rate of Return (Ln. 17 ÷ Ln. 23)	1.45%	0.36%	6.38%	n/a	6.10%	469.42%
26							
27	Required Rate of Return (Sch. A-1, Ln. 12)	9.72%	9.72%	9.72%	9.72%	9.72%	9.72%
28							
29	Required Operating Income (Ln. 23 X Ln. 27)	\$ 195,785 \$	160,223 \$	33,382 \$	-	\$ 2,177 \$	3
30							
31	Operating Income Deficiency (Ln. 29 - Ln. 17)	\$ 166,478 \$	154,352 \$	11,479 \$	-	\$ 812 \$	(165)
32							
33	Additional Taxes at Proposed Rates						
34	(Sch. G-4, Lns. 42 + 48 - 18 + 24)	\$ 139,259 \$	99,583 \$	37,694 \$	-	\$ 1,968 \$	14
35							
36	Required Increase in Gross Revenues (Ln. 31 + Ln. 34)	\$ 305,737 \$	253,935 \$	49,174 \$	-	\$ 2,779 \$	(151)
37							
38	% Required Increase in Gross Revenues (Ln. 36 ÷ Ln. 5)	32.26%	32.70%	30.34%	0.00%	31.65%	-51.71%
39							
40	Gross Revenue Requirement (Ln. 5 + Ln. 36)	\$ 1,253,342 \$	1,030,382 \$	211,259 \$	-	\$ 11,561 \$	141
41							
42	Less: Miscellaneous Revenues at Proposed Rates	\$ (24,610) \$	(19,496) \$	(4,848) \$	-	\$ (259) \$	(6)
43							
44	Revenue Requirement - Metered Water Revenues	\$ 1,228,733 \$	1,010,886 \$	206,411 \$	-	\$ 11,302 \$	135
45							
46							
47							
48	% of Revenues Required from Fixed Charge	41%	42%	36%	n/a	38%	100%
49	% of Revenues Required from Commodity Charge	59%	58%	64%	n/a	62%	0%

<sup>1</sup>Allocated to customer classes based on percentage of total water revenues

Supporting Schedules:  
G-3 Rebuttal, G-4 Rebuttal, H-1 Rebuttal

Line No.	San Manuel					[F]		[G]	
	[A]	[B]	[C]	[D]	[E]	Cost of Service		Commodity	
						Monthly Fixed 5/8"	Per M Gal	Monthly Fixed 5/8"	Per M Gal
1									
2	Unit								
3	142,070	equiv. meter	bill						
4	461,679	\$ 1,757	\$ 17,597	n/a					
5	3.25	\$ 563,468	\$ 228,055	141	\$ 1,253,342				
6			\$ 12.96	n/a					
7									
8	Residential								
9	Units of Service								
10	Cost of Service	1,404	16,740	n/a					
11		\$ 442,106	\$ 208,217	n/a	\$ 1,030,382	\$ 25.56	\$ 4.9775		
12	Commercial								
13	Units of Service	330	840	n/a					
14	Cost of Service	\$ 113,900	\$ 19,133	n/a	\$ 211,259	\$ 37.16	\$ 6.6000		
15	Industrial								
16	Units of Service	-	-	n/a					
17	Cost of Service	\$ -	\$ -	n/a	\$ -	\$ -	\$ -		
18									
19									
20	Other								
21	Units of Service	822	17	n/a					
22	Cost of Service	\$ 3,395	\$ 7,462	n/a	\$ 11,561	\$ 55.14	\$ 8.6709		
23									
24	Direct Private Fire								
25	Cost of Service	n/a	n/a	141	\$ 141				
26									
27									
28	Total System Cost of Service	\$ 461,679	\$ 563,468	\$ 228,055	\$ 141	\$ 1,253,342			
29									
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## ARIZONA WATER COMPANY

Test Year Ended December 31, 2010

Rate of Return by Customer Class - Present Rates

Line No.	Description	Oracle					Direct Private Fire
		[A] Adjstd' Total - Rebuttal	[B] Residential	[C] Commercial	[D] Industrial	[E] Other	
1							
2	Operating Revenues						
3	Water Revenues (Sch. H-1)	\$ 977,602	\$ 801,039	\$ 156,439	\$ -	\$ 19,841	\$ 283
4	Miscellaneous Revenues <sup>1</sup> (Sch. H-1)	12,494	10,237	1,999	-	254	4
5	Total Operating Revenues	\$ 990,095	\$ 811,276	\$ 158,438	\$ -	\$ 20,094	\$ 287
6							
7	Operating Expenses						
8	Operations & Maintenance Expense	543,550	471,376	64,177	-	7,997	-
9	Depreciation & Amortization Expense	177,155	152,934	20,952	-	3,269	-
10	Income Taxes	50,288	26,626	21,176	-	2,379	106
11	Property Taxes	42,848	35,109	6,857	-	870	12
12	Other Taxes	12,688	11,003	1,498	-	187	-
13	Total Operating Expenses	\$ 826,530	\$ 697,049	\$ 114,660	\$ -	\$ 14,702	\$ 118
14							
15	Taxable Income	130,270	68,974	54,857	-	6,164	275
16							
17	Net Operating Income	\$ 163,566	\$ 114,227	\$ 43,778	\$ -	\$ 5,392	\$ 169
18							
19	Interest Expense	83,584	71,879	10,097	-	1,608	-
20							
21							
22							
23	Rate Base	\$ 2,497,996	\$ 2,148,173	\$ 301,772	\$ -	\$ 48,052	\$ -
24							
25	Rate of Return (Ln. 17 ÷ Ln. 23)	6.55%	5.32%	14.51%	n/a	11.22%	n/a
26							
27	Required Rate of Return (Sch. A-1, Ln. 12)	9.72%	9.72%	9.72%	9.72%	9.72%	9.72%
28							
29	Required Operating Income (Ln. 23 X Ln. 27)	\$ 242,745	\$ 208,751	\$ 29,325	\$ -	\$ 4,669	\$ -
30							
31	Operating Income Deficiency (Ln. 29 - Ln. 17)	\$ 79,180	\$ 94,524	\$ (14,453)	\$ -	\$ (723)	\$ (169)
32							
33	Additional Taxes at Proposed Rates						
34	(Sch. G-4, Lns. 42 + 48 - 18 + 24)	\$ 43,528	\$ 23,413	\$ 17,244	\$ -	\$ 2,854	\$ 17
35							
36	Required Increase in Gross Revenues (Ln. 31 + Ln. 34)	\$ 122,708	\$ 117,937	\$ 2,791	\$ -	\$ 2,131	\$ (151)
37							
38	% Required Increase in Gross Revenues (Ln. 36 ÷ Ln. 5)	12.39%	14.54%	1.76%	0.00%	10.61%	-52.77%
39							
40	Gross Revenue Requirement (Ln. 5 + Ln. 36)	\$ 1,112,803	\$ 929,213	\$ 161,229	\$ -	\$ 22,225	\$ 136
41							
42	Less: Miscellaneous Revenues at Proposed Rates	\$ (19,212)	\$ (15,221)	\$ (3,511)	\$ -	\$ (474)	\$ (6)
43							
44	Revenue Requirement - Metered Water Revenues	\$ 1,093,591	\$ 913,992	\$ 157,718	\$ -	\$ 21,752	\$ 130
45							
46							
47							
48	% of Revenues Required from Fixed Charge	51%	52%	44%	n/a	43%	100%
49	% of Revenues Required from Commodity Charge	49%	48%	56%	n/a	57%	0%
50							
51							
52							
53							
54	<sup>1</sup> Allocated to customer classes based on						
55	percentage of total water revenues						

Supporting Schedules:

G-3 Rebuttal, G-4 Rebuttal, H-1 Rebuttal

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Recap Schedules:



Line No.	Oracle					[E]		[F]		[G]
	[A]	[B]	[C]	[D]		Total Cost of Service		Monthly Fixed 5/8"	Cost of Service	
	Commodity	Demand	Customer	Direct Private Fire						Commodity Per M Gal
1	M Gal	equiv. meter	bill							
2	112,722	1,739	18,100	n/a						
3	223,287	\$ 646,850	\$ 242,531	136	\$	1,112,803				
4	1.98	\$ 371.98	\$ 13.40	n/a						
5										
6										
7										
8										
9	Residential									
10	Units of Service	1,488	16,920	n/a						
11	Cost of Service	\$ 536,859	\$ 216,743	n/a	\$	929,213		\$ 27.84	\$ 4.8421	
12	Commercial									
13	Units of Service	213	1,152	n/a						
14	Cost of Service	\$ 94,464	\$ 24,053	n/a	\$	161,229		\$ 39.35	\$ 4.7538	
15	Industrial									
16	Units of Service	-	-	n/a						
17	Cost of Service	\$ -	\$ -	n/a	\$	-		\$ -	\$ -	
18										
19										
20	Other									
21	Units of Service	37	28	n/a						
22	Cost of Service	\$ 15,526	\$ 1,735	n/a	\$	22,225		\$ 79.29	\$ 6.0671	
23										
24	Direct Private Fire									
25	Cost of Service	n/a	n/a	136	\$	136				
26										
27	Total System Cost of Service	\$ 223,287	\$ 646,850	\$ 242,531	\$ 136	\$ 1,112,803				

**ARIZONA WATER COMPANY**

Test Year Ended December 31, 2010  
Rate of Return by Customer Class - Present Rates

Exhibit  
Schedule G-1 Rebuttal  
Page 11 of 14  
Witness: Reiker

		SaddleBrooke Ranch				
		(A)	(B)	(C)	(D)	(E) (F)
		Adjusted Total - Rebuttal	Residential	Commercial	Industrial	Other Direct Private Fire
1	Operating Revenues					
2	Water Revenues (Sch. H-1)	\$ 115,521	\$ 45,127	\$ 61,277	\$ -	\$ 9,032
3	Miscellaneous Revenues <sup>1</sup> (Sch. H-1)	1,582	618	839	-	124
4	Total Operating Revenues	\$ 117,103	\$ 45,745	\$ 62,116	\$ -	\$ 9,155
5						
6	Operating Expenses					
7	Operations & Maintenance Expense	147,769	60,293	76,231	-	11,245
8	Depreciation & Amortization Expense	89,429	58,549	28,264	-	2,242
9	Income Taxes	(48,530)	(29,068)	(17,508)	-	(1,842)
10	Property Taxes	5,068	1,980	2,688	-	396
11	Other Taxes	567	231	293	-	43
12	Total Operating Expenses	\$ 194,302	\$ 91,985	\$ 89,967	\$ -	\$ 12,085
13						
14	Taxable Income	(125,730)	(75,308)	(45,360)	-	(4,771)
15						
16	Net Operating Income	\$ (77,200)	\$ (46,240)	\$ (27,851)	\$ -	\$ (2,930)
17						
18	Interest Expense	-	-	-	-	-
19						
20						
21						
22						
23	Rate Base	\$ (116,014)	\$ (107,281)	\$ (3,847)	\$ -	\$ 611
24	Rate of Return (Ln. 17 + Ln. 23)	n/a	n/a	n/a	n/a	-479.85%
25						
26	Required Rate of Return (Sch. A-1, Ln. 12)	Note <sup>2</sup>	Note <sup>2</sup>	Note <sup>2</sup>	Note <sup>2</sup>	Note <sup>2</sup>
27						
28	Required Operating Income (Ln. 23 X Ln. 27)	\$ -	\$ -	\$ -	\$ -	\$ -
29						
30	Operating Income Deficiency (Ln. 29 - Ln. 17)	\$ 77,200	\$ 46,240	\$ 27,851	\$ -	\$ 2,930
31						
32	Additional Taxes at Proposed Rates (Sch. G-4, Lns. 42 + 48 - 18 + 24)	\$ 28,719	\$ 6,474	\$ 19,364	\$ -	\$ 2,726
33						
34	Required Increase in Gross Revenues (Ln. 31 + Ln. 34)	\$ 105,918	\$ 52,714	\$ 47,215	\$ -	\$ 5,655
35						
36	% Required Increase in Gross Revenues (Ln. 36 ÷ Ln. 5)	90.45%	115.23%	76.01%	0.00%	61.77%
37						
38	Gross Revenue Requirement (Ln. 5 + Ln. 36)	\$ 223,021	\$ 98,459	\$ 109,331	\$ -	\$ 14,810
39						
40	Less: Miscellaneous Revenues at Proposed Rates	\$ (2,884)	\$ (949)	\$ (1,684)	\$ -	\$ (243)
41						
42	Revenue Requirement - Metered Water Revenues	\$ 220,137	\$ 97,510	\$ 107,647	\$ -	\$ 14,567
43						
44						
45						
46						
47						
48	% of Revenues Required from Fixed Charge	35%	52%	22%	n/a	13%
49	% of Revenues Required from Commodity Charge	65%	48%	78%	n/a	87%
50						
51						
52						
53						
54						
55						

<sup>2</sup>Adopts Staff's recommendation to set required operating income for SaddleBrooke Ranch equal to \$0 as a result of negative rate base.

<sup>1</sup>Allocated to customer classes based on percentage of total water revenues

SaddleBrooke Ranch									
Line No.	[A]	[B]	[C]	[D]	[E]	[F]	[G]		
	Commodity	Demand	Customer	Direct	Total Cost	Monthly	Cost of Service		
	M Gal	equiv. meter	bill	Private Fire	of Service	Fixed 5/8"	Commodity		
							Per M Gal		
1									
2	Unit								
3	Total Units	207	1,359						
4	Cost of Service	\$ 96,790	\$ 28,932	n/a	\$ 223,021				
5	Cost per Unit	\$ 4.93	\$ 466.48	n/a					
6									
7									
8	Residential								
9	Units of Service	139	1,212	n/a					
10	Cost of Service	\$ 61,730	\$ 20,441	n/a	\$ 98,459	\$ 35.35	\$ 9.6292		
11									
12	Commercial								
13	Units of Service	64	144	n/a					
14	Cost of Service	\$ 32,805	\$ 7,620	n/a	\$ 109,331	\$ 74.17	\$ 6.7468		
15									
16	Industrial								
17	Units of Service	-	-	n/a					
18	Cost of Service	\$ -	\$ -	n/a	\$ -	\$ -	\$ -		
19									
20	Other								
21	Units of Service	4	3	n/a					
22	Cost of Service	\$ 2,255	\$ 871	n/a	\$ 14,810	\$ 313.82	\$ 6.1211		
23									
24	Direct Private Fire								
25	Cost of Service	n/a	n/a	420	\$ 420				
26									
27									
28	Total System Cost of Service	\$ 96,790	\$ 28,932	\$ 420	\$ 223,021				
29									
30									
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## ARIZONA WATER COMPANY

Test Year Ended December 31, 2010

Rate of Return by Customer Class - Present Rates

Line No.	Description	Winkelman					Direct Private Fire
		[A] Adjstd' Total - Rebuttal	[B] Residential	[C] Commercial	[D] Industrial	[E] Other	
1							
2	Operating Revenues						
3	Water Revenues (Sch. H-1)	\$ 100,421	\$ 54,241	\$ 43,091	\$ 3,089	\$ -	\$ -
4	Miscellaneous Revenues <sup>1</sup> (Sch. H-1)	1,689	902	716	51	-	-
5	Total Operating Revenues	\$ 102,090	\$ 55,143	\$ 43,807	\$ 3,140	\$ -	\$ -
6							
7	Operating Expenses						
8	Operations & Maintenance Expense	60,435	38,580	20,394	1,460	-	-
9	Depreciation & Amortization Expense	20,297	13,362	6,430	505	-	-
10	Income Taxes	334	(3,581)	3,677	238	-	-
11	Property Taxes	8,910	4,813	3,823	274	-	-
12	Other Taxes	1,339	855	452	32	-	-
13	Total Operating Expenses	\$ 91,315	\$ 54,028	\$ 34,777	\$ 2,510	\$ -	\$ -
14							
15	Taxable Income	858	(9,189)	9,435	612	-	-
16							
17	Net Operating Income	\$ 10,775	\$ 1,114	\$ 9,030	\$ 631	\$ -	\$ -
18							
19	Interest Expense	10,252	6,722	3,272	257	-	-
20							
21							
22	Rate Base	\$ 306,390	\$ 200,905	\$ 97,790	\$ 7,695	\$ -	\$ -
23							
24	Rate of Return (Ln. 17 ÷ Ln. 23)	3.52%	0.55%	9.23%	8.20%	n/a	n/a
25							
26	Required Rate of Return (Sch. A-1, Ln. 12)	9.72%	9.72%	9.72%	9.72%	9.72%	9.72%
27							
28	Required Operating Income (Ln. 23 X Ln. 27)	\$ 29,774	\$ 19,523	\$ 9,503	\$ 748	\$ -	\$ -
29							
30	Operating Income Deficiency (Ln. 29 - Ln. 17)	\$ 18,999	\$ 18,409	\$ 473	\$ 117	\$ -	\$ -
31							
32	Additional Taxes at Proposed Rates (Sch. G-4, Lns. 42 + 48 - 18 + 24)	\$ 12,865	\$ 6,679	\$ 6,039	\$ 147	\$ -	\$ -
33							
34	Required Increase in Gross Revenues (Ln. 31 + Ln. 34)	\$ 31,863	\$ 25,087	\$ 6,511	\$ 264	\$ -	\$ -
35							
36	% Required Increase in Gross Revenues (Ln. 36 ÷ Ln. 5)	31.21%	45.50%	14.86%	8.42%	100.00%	100.00%
37							
38	Gross Revenue Requirement (Ln. 5 + Ln. 36)	\$ 133,953	\$ 80,230	\$ 50,318	\$ 3,405	\$ -	\$ -
39							
40	Less: Miscellaneous Revenues at Proposed Rates	\$ (2,543)	\$ (1,360)	\$ (1,116)	\$ (67)	\$ -	\$ -
41							
42	Revenue Requirement - Metered Water Revenues	\$ 131,410	\$ 78,870	\$ 49,203	\$ 3,337	\$ -	\$ -
43							
44							
45							
46							
47	% of Revenues Required from Fixed Charge	55%	61%	46%	46%	n/a	100%
48	% of Revenues Required from Commodity Charge	45%	39%	54%	54%	n/a	0%
49							
50							
51							
52							
53							
54	<sup>1</sup> Allocated to customer classes based on						
55	percentage of total water revenues						

Supporting Schedules:

G-3 Rebuttal, G-4 Rebuttal, H-1 Rebuttal

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Recap Schedules:

Winkelman									
Line No.	[A]	[B]	[C]	[D]	[E]	[F]	[G]		
	Commodity	Demand	Customer	Direct	Total Cost	Cost of Service	Commodity		
	M Gal	equiv. meter	bill	Private Fire	of Service	Monthly Fixed 5/8"	Per M Gal		
1									
2									
3	Unit								
4	Total Units	30,732	239	1,848	n/a				
5	Cost of Service	\$ 25,143	\$ 70,701	\$ 38,109	\$ -	\$ 133,953			
6	Cost per Unit	\$ 0.82	\$ 295.62	\$ 20.62	n/a				
7									
8	Residential								
9	Units of Service	15,912	137	1,608	n/a				
10	Cost of Service	\$ 12,156	\$ 38,138	\$ 29,937	n/a	\$ 80,230	\$ 30.22	\$	1,9623
11									
12	Commercial								
13	Units of Service	13,991	94	228	n/a				
14	Cost of Service	\$ 12,293	\$ 30,248	\$ 7,777	n/a	\$ 50,318	\$ 47.49	\$	1,9596
15									
16	Industrial								
17	Units of Service	829	8	12	n/a				
18	Cost of Service	\$ 694	\$ 2,316	\$ 395	n/a	\$ 3,405	\$ 44.97	\$	2,2338
19									
20	Other								
21	Units of Service	-	-	-	n/a				
22	Cost of Service	\$ -	\$ -	\$ -	n/a	\$ -	\$ -	\$	-
23									
24	Direct Private Fire								
25	Cost of Service	n/a	n/a	n/a	\$ -	\$ -			
26									
27									
28	Total System Cost of Service	\$ 25,143	\$ 70,701	\$ 38,109	\$ -	\$ 133,953			
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Line No.		Eastern Group					Direct Private Fire
		(A) Adjstd' w/ Increase - Rebuttal	(B) Residential	(C) Commercial	(D) Industrial	(E) Other	
1							
2	Operating Revenues						
3	Water Revenues (Sch. H-1)	\$ 24,739,591	\$ 19,372,255	\$ 4,822,349	\$ 86,252	\$ 383,206	\$ 75,628
4	Miscellaneous Revenues <sup>1</sup> (Sch. H-1)	975,534	775,579	180,055	3,868	13,081	2,951
5	Total Operating Revenues	\$ 25,715,225	\$ 20,147,834	\$ 5,002,404	\$ 90,120	\$ 396,288	\$ 78,579
6							
7	Operating Expenses						
8	Operations & Maintenance Expense	11,964,006	10,010,679	1,791,757	33,869	127,524	177
9	Depreciation & Amortization Expense	3,567,635	3,005,439	489,539	7,276	37,166	28,214
10	Income Taxes	2,552,005	1,616,489	834,359	15,093	72,990	13,074
11	Property Taxes	1,187,906	934,000	228,419	4,420	17,484	3,584
12	Other Taxes	257,300	215,902	38,051	707	2,636	4
13	Total Operating Expenses	\$ 19,528,852	\$ 15,762,509	\$ 3,382,125	\$ 61,365	\$ 257,799	\$ 45,054
14							
15	Taxable Income	6,611,604	4,187,916	2,161,615	39,102	189,099	33,873
16							
17	Net Operating Income	\$ 6,186,373	\$ 4,385,325	\$ 1,620,279	\$ 28,755	\$ 138,489	\$ 33,525
18							
19	Interest Expense	2,126,774	1,793,898	293,023	4,746	22,380	12,727
20							
21							
22	Rate Base	\$ 63,560,931	\$ 53,612,578	\$ 8,757,309	\$ 141,851	\$ 668,836	\$ 380,357
23							
24	Rate of Return <sup>2</sup> (Ln. 17 ÷ Ln. 22)	9.73%	8.14%	18.50%	20.27%	20.71%	8.81%
25							
26	Increase in Gross Revenues	\$ 5,198,269	\$ 4,143,082	\$ 962,901	\$ 9,894	\$ 75,129	\$ 7,262
27							
28	% Increase in Gross Revenues	25.3%	25.9%	23.8%	12.3%	23.4%	10.2%
29							
30							
31	% of Revenues Generated from Fixed Charge						
32	% of Revenues Generated from Commodity Charge	49%	51%	39%	38%	40%	100%
33		51%	49%	61%	62%	60%	0%
34							
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51							
52	<sup>1</sup> Allocated to customer classes based on						
53	percentage of total water revenues						
54	<sup>2</sup> Rate of return at proposed rates includes						
55	the effects of proposed rate consolidation						

<sup>1</sup>Allocated to customer classes based on percentage of total water revenues  
<sup>2</sup>Rate of return at proposed rates includes the effects of proposed rate consolidation

**ARIZONA WATER COMPANY**

Test Year Ended December 31, 2010

Cost of Service Summary - Proposed Rates

Line No.	Description	Supersition (Apache Junction, Superior, Miami)					Direct Private Fire
		[A] Adjstd' w/ Increase - Rebuttal	[B] Residential	[C] Commercial	[D] Industrial	[E] Other	
1	Operating Revenues						
2	Water Revenues (Sch. H-1)	\$ 18,125,999	\$ 14,580,858	\$ 3,197,568	\$ 78,895	\$ 214,050	\$ 54,628
3	Miscellaneous Revenues <sup>1</sup> (Sch. H-1)	857,550	689,828	151,279	3,733	10,127	2,584
4	Total Operating Revenues	\$ 18,983,550	\$ 15,270,686	\$ 3,348,847	\$ 82,627	\$ 224,177	\$ 57,212
5							
6	Operating Expenses						
7	Operations & Maintenance Expense	8,299,226	7,060,358	1,134,948	30,935	72,874	110
8	Depreciation & Amortization Expense	2,671,695	2,288,422	332,723	6,268	25,004	19,278
9	Income Taxes	2,020,001	1,388,875	569,271	14,120	37,481	10,254
10	Property Taxes	921,351	741,150	182,533	4,010	10,880	2,777
11	Other Taxes	170,486	145,036	23,314	635	1,497	2
12	Total Operating Expenses	\$ 14,082,758	\$ 11,623,842	\$ 2,222,789	\$ 55,969	\$ 147,737	\$ 32,421
13							
14	Taxable Income	5,233,314	3,598,227	1,474,837	36,581	97,104	26,564
15							
16	Net Operating Income	\$ 4,900,792	\$ 3,646,845	\$ 1,126,058	\$ 26,658	\$ 76,439	\$ 24,791
17							
18	Interest Expense	1,687,478	1,437,493	220,491	4,197	16,817	8,481
19							
20	Rate Base	\$ 50,432,117	\$ 42,961,020	\$ 6,589,625	\$ 125,438	\$ 502,584	\$ 253,449
21							
22	Rate of Return <sup>2</sup> (Ln. 17 ÷ Ln. 22)	9.72%	8.49%	17.09%	21.25%	15.21%	9.78%
23							
24	Increase in Gross Revenues	\$ 3,926,987	\$ 3,254,778	\$ 610,308	\$ 8,928	\$ 49,546	\$ 3,427
25							
26	% Increase in Gross Revenues	26.1%	27.1%	22.3%	12.1%	28.4%	6.4%
27							
28	% of Revenues Generated from Fixed Charge	50%	52%	40%	35%	48%	100%
29	% of Revenues Generated from Commodity Charge	50%	48%	60%	65%	52%	0%
30							
31							
32							
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<sup>1</sup> Allocated to customer classes based on percentage of total water revenues  
<sup>2</sup> Rate of return at proposed rates includes the effects of proposed rate consolidation

**ARIZONA WATER COMPANY**

Test Year Ended December 31, 2010

Cost of Service Summary - Proposed Rates

		Cochise (Bisbee, Sierra Vista)						
		(A)	(B)	(C)	(D)	(E)	(F)	
		Adjstd' w/ Increase - Rebuttal	Residential	Commercial	Industrial	Other	Direct Private Fire	
Line No.								
1								
2	Operating Revenues							
3	Water Revenues (Sch. H-1)	\$ 3,939,820	\$ 2,792,873	\$ 1,009,785	\$ 3,875	\$ 113,394	\$ 19,893	
4	Miscellaneous Revenues <sup>1</sup> (Sch. H-1)	68,735	48,725	17,617	68	1,978	347	
5	Total Operating Revenues	\$ 4,008,555	\$ 2,841,598	\$ 1,027,402	\$ 3,943	\$ 115,373	\$ 20,240	
6								
7	Operating Expenses							
8	Operations & Maintenance Expense	2,147,527	1,724,610	391,251	1,474	30,126	66	
9	Depreciation & Amortization Expense	496,103	398,859	82,721	503	5,461	8,559	
10	Income Taxes	337,481	130,660	176,172	574	27,577	2,478	
11	Property Taxes	151,085	107,102	38,723	149	4,348	763	
12	Other Taxes	57,585	46,244	10,491	40	808	2	
13	Total Operating Expenses	\$ 3,189,781	\$ 2,407,495	\$ 699,359	\$ 2,739	\$ 68,320	\$ 11,868	
14								
15	Taxable Income	874,328	338,558	456,418	1,486	71,444	6,421	
16								
17	Net Operating Income	\$ 818,774	\$ 434,103	\$ 328,043	\$ 1,204	\$ 47,053	\$ 8,372	
18								
19	Interest Expense	281,927	226,225	47,797	292	3,185	4,429	
20								
21	Rate Base	\$ 8,425,690	\$ 6,760,967	\$ 1,428,453	\$ 8,718	\$ 95,183	\$ 132,369	
22								
23	Rate of Return <sup>2</sup> (Ln. 17 ÷ Ln. 22)	9.72%	6.42%	22.96%	13.82%	49.43%	6.32%	
24								
25	Increase in Gross Revenues	\$ 705,055	\$ 541,365	\$ 152,882	\$ 557	\$ 6,876	\$ 3,374	
26								
27	% Increase in Gross Revenues	21.3%	23.5%	17.5%	16.5%	6.3%	20.0%	
28								
29								
30								
31	% of Revenues Generated from Fixed Charge							
32	% of Revenues Generated from Commodity Charge	48%	53%	36%	94%	22%	100%	
33		52%	47%	64%	6%	78%	0%	
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<sup>1</sup>Allocated to customer classes based on percentage of total water revenues  
<sup>2</sup>Rate of return at proposed rates includes the effects of proposed rate consolidation



Line No.		San Manuel					
		(A) Adjst'd w/ Increase - Rebuttal	(B) Residential	(C) Commercial	(D) Industrial	(E) Other	(F) Direct Private Fire
1	Operating Revenues						
2	Water Revenues (Sch. H-1)	\$ 1,276,102	\$ 1,010,949	\$ 251,386	\$ -	\$ 13,442	\$ 324
3	Miscellaneous Revenues <sup>1</sup> (Sch. H-1)	24,610	19,496	4,848	-	259	6
4	Total Operating Revenues	\$ 1,300,712	\$ 1,030,445	\$ 256,234	\$ -	\$ 13,702	\$ 330
5	Operating Expenses						
6	Depreciation & Maintenance Expense	765,499	655,462	104,756	-	5,281	0
7	Income Taxes	112,956	93,313	18,450	-	1,189	3
8	Property Taxes	110,476	86,080	42,032	-	2,243	121
9	Other Taxes	53,990	42,772	10,636	-	569	14
10	Total Operating Expenses	14,635	12,532	2,003	-	101	0
11	Taxable Income	\$ 1,057,557	\$ 870,159	\$ 177,877	\$ -	\$ 9,384	\$ 137
12	Net Operating Income	286,217	171,198	108,895	-	5,812	312
13	Interest Expense	\$ 243,155	\$ 160,287	\$ 78,357	\$ -	\$ 4,318	\$ 193
14	Rate Base	67,414	55,169	11,494	-	750	1
15	Rate of Return <sup>2</sup> (Ln. 17 ÷ Ln. 22)	\$ 2,014,751	\$ 1,648,793	\$ 343,516	\$ -	\$ 22,406	\$ 36
16	Increase in Gross Revenues	12.07%	9.72%	22.81%	0.00%	19.27%	538.42%
17	% Increase in Gross Revenues	\$ 353,106	\$ 253,999	\$ 94,149	\$ -	\$ 4,920	\$ 39
18	% of Revenues Generated from Fixed Charge	37.3%	32.7%	58.1%	0.0%	56.0%	13.2%
19	% of Revenues Generated from Commodity Charge	40%	36%	51%	0%	66%	100%
20		60%	64%	49%	0%	34%	0%

<sup>1</sup>Allocated to customer classes based on percentage of total water revenues  
<sup>2</sup>Rate of return at proposed rates includes the effects of proposed rate consolidation

Line No.		Oracle					[F]
		[A] Adjstd' w/ Increase - Rebuttal	[B] Residential	[C] Commercial	[D] Industrial	[E] Other	
1							
2	Operating Revenues						
3	Water Revenues (Sch. H-1)	\$ 1,080,666	\$ 856,189	\$ 197,509	\$ -	\$ 26,644	\$ 324
4	Miscellaneous Revenues <sup>1</sup> (Sch. H-1)	19,212	15,221	3,511	-	474	6
5	Total Operating Revenues	\$ 1,099,877	\$ 871,410	\$ 201,020	\$ -	\$ 27,118	\$ 330
6							
7	Operating Expenses						
8	Operations & Maintenance Expense	543,550	471,376	64,177	-	7,997	-
9	Depreciation & Amortization Expense	177,155	152,934	20,952	-	3,269	-
10	Income Taxes	91,929	49,706	37,101	-	5,000	122
11	Property Taxes	44,735	35,443	8,176	-	1,103	13
12	Other Taxes	12,688	11,003	1,498	-	187	-
13	Total Operating Expenses	\$ 870,058	\$ 720,462	\$ 131,904	\$ -	\$ 17,556	\$ 136
14							
15	Taxable Income	238,165	128,775	96,120	-	12,954	316
16							
17	Net Operating Income	\$ 229,820	\$ 150,948	\$ 69,116	\$ -	\$ 9,562	\$ 194
18							
19	Interest Expense	83,584	71,879	10,097	-	1,608	-
20							
21	Rate Base	\$ 2,497,996	\$ 2,148,173	\$ 301,772	\$ -	\$ 48,052	\$ -
22							
23	Rate of Return <sup>2</sup> (Ln. 17 + Ln. 22)	9.20%	7.03%	22.90%	0.00%	19.90%	#DIV/0!
24							
25	Increase in Gross Revenues	\$ 109,782	\$ 60,134	\$ 42,582	\$ -	\$ 7,024	\$ 43
26							
27	% Increase in Gross Revenues	11.1%	7.4%	26.9%	0.0%	35.0%	14.9%
28							
29							
30							
31	% of Revenues Generated from Fixed Charge	45%	45%	43%	0%	55%	100%
32	% of Revenues Generated from Commodity Charge	55%	55%	57%	0%	45%	0%
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<sup>1</sup>Allocated to customer classes based on percentage of total water revenues  
<sup>2</sup>Rate of return at proposed rates includes the effects of proposed rate consolidation

SaddleBrooke Ranch						
Line No.	[A] Adjstd' w/ Increase - Rebuttal	[B] Residential	[C] Commercial	[D] Industrial	[E] Other	[F] Direct Private Fire
1						
2						
3	Operating Revenues					
4	Water Revenues (Sch. H-1)	185,694 \$	61,103 \$	108,456 \$	- \$	15,676 \$
5	Miscellaneous Revenues <sup>1</sup> (Sch. H-1)	2,884	949	1,684	-	243
6	Total Operating Revenues	\$ 188,578	\$ 62,052	\$ 110,141	\$ -	\$ 15,919
7						459
8	Operating Expenses					466
9	Operations & Maintenance Expense	147,769	60,293	76,231	-	11,245
10	Depreciation & Amortization Expense	89,429	58,549	28,264	-	2,242
11	Income Taxes	(21,652)	(22,887)	509	-	697
12	Property Taxes	6,908	2,273	4,035	-	583
13	Other Taxes	567	231	293	-	43
14	Total Operating Expenses	\$ 223,021	\$ 98,459	\$ 109,331	\$ -	\$ 14,810
15						420
16	Taxable Income	(56,095)	(59,295)	1,319	-	1,806
17	Net Operating Income	\$ (34,443)	\$ (36,408)	\$ 810	\$ -	\$ 1,109
18						46
19	Interest Expense	-	-	-	-	-
20						
21	Rate Base	\$ (116,014)	\$ (107,281)	\$ (3,847)	\$ -	\$ 611
22						(5,497)
23	Rate of Return <sup>2</sup> (Ln. 17 + Ln. 22)	n/a	n/a	n/a	n/a	181.62%
24						n/a
25	Increase in Gross Revenues	\$ 71,475	\$ 16,306	\$ 48,025	\$ -	\$ 6,764
26						380
27	% Increase in Gross Revenues	61.0%	35.6%	77.3%	0.0%	73.9%
28						441.0%
29						
30	% of Revenues Generated from Fixed Charge					
31	% of Revenues Generated from Commodity Charge					
32		34%	58%	24%	0%	11%
33		66%	42%	76%	0%	89%
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52	<sup>1</sup> Allocated to customer classes based on					
53	percentage of total water revenues					
54	<sup>2</sup> Rate of return at proposed rates includes					
55	the effects of proposed rate consolidation					

<sup>1</sup>Allocated to customer classes based on  
percentage of total water revenues  
<sup>2</sup>Rate of return at proposed rates includes  
the effects of proposed rate consolidation

Winkelman						
Line No.	(A) Adjstd' w/ Increase - Rebuttal	(B) Residential	(C) Commercial	(D) Industrial	(E) Other	(F) Direct Private Fire
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<sup>1</sup>Allocated to customer classes based on percentage of total water revenues  
<sup>2</sup>Rate of return at proposed rates includes the effects of proposed rate consolidation

Line No.	Rate Base	Eastern Group					Direct Private Fire
		[A]	[B]	[C]	[D]	[E]	
		Adjusted Total - Rebuttal	Residential	Commercial	Industrial	Other	
1							
2							
3	Net Utility Plant in Service						
4	Commodity	\$ 9,053,663	\$ 6,872,598	\$ 1,979,407	\$ 53,028	\$ 148,629	\$ -
5	Demand	81,482,970	67,952,444	12,366,165	166,177	998,184	-
6	Customer	19,961,209	18,978,469	956,613	7,528	18,600	-
7	Direct Private Fire	852,122	-	-	-	-	852,122
8	Subtotal Net Utility Plant in Service	\$ 111,349,964	\$ 93,803,512	\$ 15,302,185	\$ 226,732	\$ 1,165,413	\$ 852,122
9							
10	Deductions						
11	Commodity	3,668,846	2,692,951	878,541	20,287	77,067	-
12	Demand	33,019,617	27,291,429	5,247,133	62,202	418,853	-
13	Customer	11,616,838	11,039,986	561,546	4,025	11,281	-
14	Direct Private Fire	480,898	-	-	-	-	480,898
15	Subtotal Deductions	\$ 48,786,200	\$ 41,024,365	\$ 6,687,220	\$ 86,515	\$ 507,202	\$ 480,898
16							
17	Additions						
18	Commodity	79,868	61,118	17,116	316	1,319	-
19	Demand	718,812	593,664	114,767	1,251	9,131	-
20	Customer	189,353	176,649	10,461	67	175	-
21	Direct Private Fire	9,133	-	-	-	-	9,133
22	Subtotal Additions	\$ 997,166	\$ 833,431	\$ 142,344	\$ 1,633	\$ 10,625	\$ 9,133
23							
24	Total Rate Base	\$ 63,560,931	\$ 53,612,578	\$ 8,757,309	\$ 141,851	\$ 668,836	\$ 380,357
25							
26							
27							
28	Total Commodity	\$ 5,464,685	\$ 4,240,766	\$ 1,117,982	\$ 33,057	\$ 72,881	\$ -
29	Total Demand	49,182,164	41,254,680	7,233,799	105,225	588,461	-
30	Total Customer	8,533,724	8,117,132	405,528	3,570	7,494	-
31	Total Direct Private Fire	380,357	-	-	-	-	380,357
32	Total Rate Base	\$ 63,560,931	\$ 53,612,578	\$ 8,757,309	\$ 141,851	\$ 668,836	\$ 380,357
33							
34							
35	Required Rate of Return	9.72%	9.72%	9.72%	9.72%	9.72%	9.72%
36							
37	Required Operating Income						
38	Commodity	\$ 531,036	\$ 412,101	\$ 108,641	\$ 3,212	\$ 7,082	\$ -
39	Demand	4,779,326	4,008,965	702,952	10,225	57,184	-
40	Customer	829,273	788,790	39,408	347	728	-
41	Direct Private Fire	36,962	-	-	-	-	36,962
42	Total Required Operating Income	\$ 6,176,597	\$ 5,209,856	\$ 851,000	\$ 13,785	\$ 64,995	\$ 36,962
43							
44	Weighted Cost of Debt	3.35%	3.35%	3.35%	3.35%	3.35%	3.35%
45							
46	Interest Expense						
47	Commodity	\$ 182,851	\$ 141,898	\$ 37,408	\$ 1,106	\$ 2,439	\$ -
48	Demand	1,645,655	1,380,398	242,046	3,521	19,690	-
49	Customer	285,542	271,602	13,569	119	251	-
50	Direct Private Fire	12,727	-	-	-	-	12,727
51	Total Interest Expense	\$ 2,126,774	\$ 1,793,898	\$ 293,023	\$ 4,746	\$ 22,380	\$ 12,727
52							
53							
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55							

**ARIZONA WATER COMPANY**

Test Year Ended December 31, 2010  
Allocation of Rate Base to Classes of Service

Exhibit  
Schedule G-3 Rebuttal  
Page 2 of 7  
Witness: Reiker

Superstition (Apache Junction, Superior, Miami)							
	[A]	[B]	[C]	[D]	[E]	[F]	
Line No.	Adjusted Total - Rebuttal	Residential	Commercial	Industrial	Other	Direct Private Fire	
1	Rate Base						
2							
3	Net Utility Plant in Service						
4	Commodity	\$ 7,051,617	\$ 5,525,029	\$ 1,395,077	\$ 52,278	\$ 79,233	
5	Demand	63,464,553	53,786,734	8,810,216	145,961	721,642	
6	Customer	15,305,417	14,671,495	614,496	5,828	13,598	
7	Direct Private Fire	603,325	-	-	-	-	
8	Subtotal Net Utility Plant in Service	\$ 86,424,912	\$ 73,983,258	\$ 10,819,789	\$ 204,067	\$ 814,472	
9						\$ 603,325	
10	Deductions						
11	Commodity	2,717,850	2,129,469	537,694	20,149	30,538	
12	Demand	24,460,654	20,730,607	3,395,654	56,257	278,137	
13	Customer	8,968,806	8,597,335	360,088	3,415	7,968	
14	Direct Private Fire	353,542	-	-	-	-	
15	Subtotal Deductions	\$ 36,500,852	\$ 31,457,411	\$ 4,293,435	\$ 79,821	\$ 316,643	
16						\$ 353,542	
17	Additions						
18	Commodity	41,139	32,233	8,139	305	462	
19	Demand	370,251	313,791	51,399	852	4,210	
20	Customer	93,000	89,148	3,734	35	83	
21	Direct Private Fire	3,666	-	-	-	-	
22	Subtotal Additions	\$ 508,056	\$ 435,172	\$ 63,271	\$ 1,192	\$ 4,755	
23						\$ 3,666	
24	Total Rate Base	\$ 50,432,117	\$ 42,961,020	\$ 6,589,625	\$ 125,438	\$ 502,584	
25						\$ 253,449	
26							
27							
28	Total Commodity	\$ 4,374,906	\$ 3,427,793	\$ 865,522	\$ 32,434	\$ 49,157	
29	Total Demand	39,374,150	33,369,918	5,465,961	90,556	447,715	
30	Total Customer	6,429,611	6,163,309	258,142	2,448	5,712	
31	Total Direct Private Fire	253,449	-	-	-	-	
32	Total Rate Base	\$ 50,432,117	\$ 42,961,020	\$ 6,589,625	\$ 125,438	\$ 502,584	
33						\$ 253,449	
34							
35	Required Rate of Return	9.72%	9.72%	9.72%	9.72%	9.72%	
36							
37	Required Operating Income						
38	Commodity	\$ 425,136	\$ 333,099	\$ 84,108	\$ 3,152	\$ 4,777	
39	Demand	3,826,223	3,242,755	531,160	8,800	43,507	
40	Customer	624,804	598,926	25,085	238	555	
41	Direct Private Fire	24,629	-	-	-	-	
42	Total Required Operating Income	\$ 4,900,792	\$ 4,174,780	\$ 640,353	\$ 12,190	\$ 48,839	
43						\$ 24,629	
44	Weighted Cost of Debt	3.35%	3.35%	3.35%	3.35%	3.35%	
45							
46	Interest Expense						
47	Commodity	\$ 146,386	\$ 114,695	\$ 28,961	\$ 1,085	\$ 1,645	
48	Demand	1,317,475	1,116,571	182,893	3,030	14,981	
49	Customer	215,137	206,227	8,638	82	191	
50	Direct Private Fire	8,481	-	-	-	-	
51	Total Interest Expense	\$ 1,687,478	\$ 1,437,493	\$ 220,491	\$ 4,197	\$ 16,817	
						\$ 8,481	

Line No.	Description	Cochise (Bisbee, Sierra Vista)				
		[A]	[B]	[C]	[D]	[E]
		Adjusted Total-Rebuttal	Residential	Commercial	Industrial	Other
1	Rate Base					
2						
3	Net Utility Plant in Service					
4	Commodity	\$ 1,008,793	\$ 710,258	\$ 270,662	\$ 58	\$ 27,815
5	Demand	9,079,135	7,224,051	1,726,719	12,490	115,876
6	Customer	3,041,492	2,813,706	224,122	956	2,708
7	Direct Private Fire	234,301	-	-	-	-
8	Subtotal Net Utility Plant in Service	\$ 13,363,720	\$ 10,748,016	\$ 2,221,502	\$ 13,504	\$ 146,399
9						
10	Deductions					
11	Commodity	375,256	264,205	100,682	22	10,347
12	Demand	3,377,302	2,687,239	642,313	4,646	43,104
13	Customer	1,393,919	1,289,525	102,715	438	1,241
14	Direct Private Fire	107,380	-	-	-	-
15	Subtotal Deductions	\$ 5,253,857	\$ 4,240,969	\$ 845,711	\$ 5,106	\$ 54,692
16						
17	Additions					
18	Commodity	23,965	16,873	6,430	1	661
19	Demand	215,683	171,614	41,020	297	2,753
20	Customer	70,731	65,434	5,212	22	63
21	Direct Private Fire	5,449	-	-	-	-
22	Subtotal Additions	\$ 315,827	\$ 253,920	\$ 52,662	\$ 320	\$ 3,476
23						
24	Total Rate Base	\$ 8,425,690	\$ 6,760,967	\$ 1,428,453	\$ 8,718	\$ 95,183
25						
26						
27						
28	Total Commodity	\$ 657,502	\$ 462,926	\$ 176,409	\$ 38	\$ 18,129
29	Total Demand	5,917,516	4,708,426	1,125,425	8,140	75,525
30	Total Customer	1,718,303	1,589,615	126,618	540	1,530
31	Total Direct Private Fire	132,369	-	-	-	-
32	Total Rate Base	\$ 8,425,690	\$ 6,760,967	\$ 1,428,453	\$ 8,718	\$ 95,183
33						
34						
35	Required Rate of Return	9.72%	9.72%	9.72%	9.72%	9.72%
36						
37	Required Operating Income					
38	Commodity	\$ 63,893	\$ 44,985	\$ 17,143	\$ 4	\$ 1,762
39	Demand	575,041	457,546	109,364	791	7,339
40	Customer	166,978	154,472	12,304	52	149
41	Direct Private Fire	12,863	-	-	-	-
42	Total Required Operating Income	\$ 818,775	\$ 657,004	\$ 138,811	\$ 847	\$ 9,250
43						
44	Weighted Cost of Debt	3.35%	3.35%	3.35%	3.35%	3.35%
45						
46	Interest Expense					
47	Commodity	\$ 22,000	\$ 15,490	\$ 5,903	\$ 1	\$ 607
48	Demand	198,002	157,546	37,657	272	2,527
49	Customer	57,495	53,189	4,237	18	51
50	Direct Private Fire	4,429	-	-	-	-
51	Total Interest Expense	\$ 281,927	\$ 226,225	\$ 47,797	\$ 292	\$ 3,185
52						
53						
54						
55						

**ARIZONA WATER COMPANY**

Test Year Ended December 31, 2010  
Allocation of Rate Base to Classes of Service

Line No.	Rate Base	San Manuel					[F]
		[A]	[B]	[C]	[D]	[E]	
		Adjusted Total - Rebuttal	Residential	Commercial	Industrial	Other	Direct Private Fire
1							
2							
3	Net Utility Plant in Service						
4	Commodity	\$ 262,763	\$ 223,362	\$ 37,880	\$ -	\$ 1,520	\$ -
5	Demand	2,364,863	1,890,184	444,162	-	30,517	-
6	Customer	472,938	449,905	22,576	-	457	-
7	Direct Private Fire	88	-	-	-	-	88
8	Subtotal Net Utility Plant in Service	\$ 3,100,852	\$ 2,563,451	\$ 504,619	\$ -	\$ 32,494	\$ 88
9							
10	Deductions						
11	Commodity	88,461	75,197	12,753	-	512	-
12	Demand	796,152	636,347	149,531	-	10,274	-
13	Customer	294,543	280,199	14,060	-	285	-
14	Direct Private Fire	55	-	-	-	-	55
15	Subtotal Deductions	\$ 1,179,212	\$ 991,743	\$ 176,344	\$ -	\$ 11,070	\$ 55
16							
17	Additions						
18	Commodity	7,948	6,757	1,146	-	46	-
19	Demand	71,536	57,177	13,436	-	923	-
20	Customer	13,824	13,151	660	-	13	-
21	Direct Private Fire	3	-	-	-	-	3
22	Subtotal Additions	\$ 93,311	\$ 77,085	\$ 15,242	\$ -	\$ 982	\$ 3
23							
24	Total Rate Base	\$ 2,014,751	\$ 1,648,793	\$ 343,516	\$ -	\$ 22,406	\$ 36
25							
26							
27							
28	Total Commodity	\$ 182,250	\$ 154,922	\$ 26,273	\$ -	\$ 1,054	\$ -
29	Total Demand	1,640,247	1,311,014	308,067	-	21,166	-
30	Total Customer	192,219	182,857	9,176	-	186	-
31	Total Direct Private Fire	36	-	-	-	-	36
32	Total Rate Base	\$ 2,014,751	\$ 1,648,793	\$ 343,516	\$ -	\$ 22,406	\$ 36
33							
34							
35	Required Rate of Return	9.72%	9.72%	9.72%	9.72%	9.72%	9.72%
36							
37	Required Operating Income						
38	Commodity	\$ 17,710	\$ 15,055	\$ 2,553	\$ -	\$ 102	\$ -
39	Demand	159,393	127,399	29,937	-	2,057	-
40	Customer	18,679	17,769	892	-	18	-
41	Direct Private Fire	3	-	-	-	-	3
42	Total Required Operating Income	\$ 195,785	\$ 160,223	\$ 33,382	\$ -	\$ 2,177	\$ 3
43							
44	Weighted Cost of Debt	3.35%	3.35%	3.35%	3.35%	3.35%	3.35%
45							
46	Interest Expense						
47	Commodity	\$ 6,098	\$ 5,184	\$ 879	\$ -	\$ 35	\$ -
48	Demand	54,883	43,867	10,308	-	708	-
49	Customer	6,432	6,118	307	-	6	-
50	Direct Private Fire	1	-	-	-	-	1
51	Total Interest Expense	\$ 67,414	\$ 55,169	\$ 11,494	\$ -	\$ 750	\$ 1
52							
53							
54							
55							



**ARIZONA WATER COMPANY**

Test Year Ended December 31, 2010  
Allocation of Rate Base to Classes of Service

Exhibit  
Schedule G-3 Rebuttal  
Page 5 of 7  
Witness: Reiker

Line No.	Rate Base	Oracle					Direct Private Fire
		[A] Adjusted Total - Rebuttal	[B] Residential	[C] Commercial	[D] Industrial	[E] Other	
1							
2							
3	Net Utility Plant in Service						
4	Commodity	\$ 398,616	\$ 324,289	\$ 66,908	\$ -	\$ 7,418	\$ -
5	Demand	3,587,545	3,070,805	439,720	-	77,020	-
6	Customer	650,277	607,884	41,388	-	1,006	-
7	Direct Private Fire	-	-	-	-	-	-
8	Subtotal Net Utility Plant in Service	\$ 4,636,439	\$ 4,002,978	\$ 548,016	\$ -	\$ 85,445	\$ -
9							
10	Deductions						
11	Commodity	179,726	146,214	30,167	-	3,345	-
12	Demand	1,617,532	1,384,547	198,258	-	34,727	-
13	Customer	412,521	385,628	26,256	-	638	-
14	Direct Private Fire	-	-	-	-	-	-
15	Subtotal Deductions	\$ 2,209,779	\$ 1,916,388	\$ 254,681	\$ -	\$ 38,709	\$ -
16							
17	Additions						
18	Commodity	6,141	4,996	1,031	-	114	-
19	Demand	55,272	47,310	6,775	-	1,187	-
20	Customer	9,924	9,277	632	-	15	-
21	Direct Private Fire	-	-	-	-	-	-
22	Subtotal Additions	\$ 71,337	\$ 61,583	\$ 8,437	\$ -	\$ 1,316	\$ -
23							
24	Total Rate Base	\$ 2,497,996	\$ 2,148,173	\$ 301,772	\$ -	\$ 48,052	\$ -
25							
26							
27							
28	Total Commodity	\$ 225,032	\$ 183,072	\$ 37,772	\$ -	\$ 4,188	\$ -
29	Total Demand	2,025,285	1,733,569	248,236	-	43,481	-
30	Total Customer	247,680	231,532	15,764	-	383	-
31	Total Direct Private Fire	-	-	-	-	-	-
32	Total Rate Base	\$ 2,497,996	\$ 2,148,173	\$ 301,772	\$ -	\$ 48,052	\$ -
33							
34							
35	Required Rate of Return	9.72%	9.72%	9.72%	9.72%	9.72%	9.72%
36							
37	Required Operating Income						
38	Commodity	\$ 21,868	\$ 17,790	\$ 3,671	\$ -	\$ 407	\$ -
39	Demand	196,809	168,461	24,123	-	4,225	-
40	Customer	24,069	22,499	1,532	-	37	-
41	Direct Private Fire	-	-	-	-	-	-
42	Total Required Operating Income	\$ 242,745	\$ 208,751	\$ 29,325	\$ -	\$ 4,669	\$ -
43							
44	Weighted Cost of Debt	3.35%	3.35%	3.35%	3.35%	3.35%	3.35%
45							
46	Interest Expense						
47	Commodity	\$ 7,530	\$ 6,126	\$ 1,264	\$ -	\$ 140	\$ -
48	Demand	67,767	58,006	8,306	-	1,455	-
49	Customer	8,287	7,747	527	-	13	-
50	Direct Private Fire	-	-	-	-	-	-
51	Total Interest Expense	\$ 83,584	\$ 71,879	\$ 10,097	\$ -	\$ 1,608	\$ -
52							
53							
54							
55							

		SaddleBrooke Ranch					
		[A]	[B]	[C]	[D]	[E]	[F]
Line No.		Adjusted Total - Rebuttal	Residential	Commercial	Industrial	Other	Direct Private Fire
1	Rate Base						
2							
3	Net Utility Plant in Service						
4	Commodity	\$ 306,213	\$ 76,373	\$ 197,197	\$ -	\$ 32,644	\$ -
5	Demand	2,755,917	1,848,410	854,379	-	53,128	-
6	Customer	376,484	335,760	39,892	-	831	-
7	Direct Private Fire	14,408	-	-	-	-	14,408
8	Subtotal Net Utility Plant in Service	\$ 3,453,022	\$ 2,260,542	\$ 1,091,468	\$ -	\$ 86,603	\$ 14,408
9							
10	Deductions						
11	Commodity	303,236	75,630	195,280	-	32,326	-
12	Demand	2,729,126	1,830,440	846,073	-	52,612	-
13	Customer	520,528	464,224	55,155	-	1,149	-
14	Direct Private Fire	19,921	-	-	-	-	19,921
15	Subtotal Deductions	\$ 3,572,811	\$ 2,370,294	\$ 1,096,509	\$ -	\$ 86,087	\$ 19,921
16							
17	Additions						
18	Commodity	335	83	216	-	36	-
19	Demand	3,012	2,020	934	-	58	-
20	Customer	412	368	44	-	1	-
21	Direct Private Fire	16	-	-	-	-	16
22	Subtotal Additions	\$ 3,775	\$ 2,471	\$ 1,193	\$ -	\$ 95	\$ 16
23							
24	Total Rate Base	\$ (116,014)	\$ (107,281)	\$ (3,847)	\$ -	\$ 611	\$ (5,497)
25							
26							
27							
28	Total Commodity	\$ 3,312	\$ 826	\$ 2,133	\$ -	\$ 353	\$ -
29	Total Demand	29,804	19,989	9,240	-	575	-
30	Total Customer	(143,632)	(128,096)	(15,219)	-	(317)	-
31	Total Direct Private Fire	(5,497)	-	-	-	-	(5,497)
32	Total Rate Base	\$ (116,014)	\$ (107,281)	\$ (3,847)	\$ -	\$ 611	\$ (5,497)
33							
34	Required Rate of Return	n/a	n/a	n/a	n/a	n/a	n/a
35							
36	Required Operating Income						
37	Commodity	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
38	Demand	-	-	-	-	-	-
39	Customer	-	-	-	-	-	-
40	Direct Private Fire	-	-	-	-	-	-
41	Total Required Operating Income	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
42							
43	Weighted Cost of Debt	3.35%	3.35%	3.35%	3.35%	3.35%	3.35%
44							
45	Interest Expense						
46	Commodity	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
47	Demand	-	-	-	-	-	-
48	Customer	-	-	-	-	-	-
49	Direct Private Fire	-	-	-	-	-	-
50	Total Interest Expense	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
51							
52							
53							
54							
55							

**ARIZONA WATER COMPANY**

Test Year Ended December 31, 2010  
Allocation of Rate Base to Classes of Service

Line No.	Description	Winkelman					Direct Private Fire
		[A] Adjusted Total - Rebuttal	[B] Residential	[C] Commercial	[D] Industrial	[E] Other	
1	Rate Base						
2							
3	Net Utility Plant in Service						
4	Commodity	\$ 25,662 \$	13,287 \$	11,683 \$	692 \$	- \$	-
5	Demand	230,956	132,262	90,969	7,725	-	-
6	Customer	114,601	99,718	14,139	744	-	-
7	Direct Private Fire	-	-	-	-	-	-
8	Subtotal Net Utility Plant in Service	\$ 371,219 \$	245,266 \$	116,791 \$	9,162 \$	- \$	-
9							
10	Deductions						
11	Commodity	4,317	2,235	1,965	116	-	-
12	Demand	38,852	22,249	15,303	1,300	-	-
13	Customer	26,520	23,076	3,272	172	-	-
14	Direct Private Fire	-	-	-	-	-	-
15	Subtotal Deductions	\$ 69,689 \$	47,561 \$	20,540 \$	1,588 \$	- \$	-
16							
17	Additions						
18	Commodity	340	176	155	9	-	-
19	Demand	3,058	1,751	1,204	102	-	-
20	Customer	1,462	1,272	180	9	-	-
21	Direct Private Fire	-	-	-	-	-	-
22	Subtotal Additions	\$ 4,860 \$	3,199 \$	1,540 \$	121 \$	- \$	-
23							
24	Total Rate Base	\$ 306,390 \$	200,905 \$	97,790 \$	7,695 \$	- \$	-
25							
26							
27							
28	Total Commodity	\$ 21,685 \$	11,227 \$	9,872 \$	585 \$	- \$	-
29	Total Demand	196,162	111,763	76,871	6,528	-	-
30	Total Customer	89,543	77,914	11,048	581	-	-
31	Total Direct Private Fire	-	-	-	-	-	-
32	Total Rate Base	\$ 306,390 \$	200,905 \$	97,790 \$	7,695 \$	- \$	-
33							
34							
35	Required Rate of Return	9.72%	9.72%	9.72%	9.72%	9.72%	9.72%
36							
37	Required Operating Income						
38	Commodity	\$ 2,107 \$	1,091 \$	959 \$	57 \$	- \$	-
39	Demand	18,965	10,861	7,470	634	-	-
40	Customer	8,701	7,571	1,074	57	-	-
41	Direct Private Fire	-	-	-	-	-	-
42	Total Required Operating Income	\$ 29,774 \$	19,523 \$	9,503 \$	748 \$	- \$	-
43							
44	Weighted Cost of Debt	3.35%	3.35%	3.35%	3.35%	3.35%	3.35%
45							
46	Interest Expense						
47	Commodity	\$ 726 \$	376 \$	330 \$	20 \$	- \$	-
48	Demand	6,530	3,740	2,572	218	-	-
49	Customer	2,996	2,607	370	19	-	-
50	Direct Private Fire	-	-	-	-	-	-
51	Total Interest Expense	\$ 10,252 \$	6,722 \$	3,272 \$	257 \$	- \$	-
52							
53							
54							
55							

## ARIZONA WATER COMPANY

Test Year Ended December 31, 2010

Allocation of Operating Expenses to Classes of Service - Summary

Exhibit  
Schedule G-4 Rebuttal  
Page 1 of 14  
Witness: Reiker

Line No.		Eastern Group				
		[A] Adjusted Total - Rebuttal	[B]	[C]	[D]	[E] [F]
1	Operating Expenses at Present Rates					
2	Operations & Maintenance Expense					
3	Commodity	\$ 4,370,908	\$ 3,345,118	\$ 934,422	\$ 23,285	\$ 68,083
4	Demand	4,644,604	3,866,243	712,135	9,526	56,700
5	Customer	2,948,316	2,799,318	145,200	1,057	2,741
6	Direct Private Fire	177	-	-	-	-
7	Total Operations & Maintenance	\$ 11,964,006	\$ 10,010,679	\$ 1,791,757	\$ 33,869	\$ 127,524
8	Depreciation & Amortization Expenses					
9	Commodity	\$ 288,201	\$ 219,305	\$ 62,599	\$ 1,644	\$ 4,653
10	Demand	2,593,808	2,161,571	394,963	5,371	31,903
11	Customer	657,412	624,564	31,978	261	609
12	Direct Private Fire	28,214	-	-	-	28,214
13	Total Depreciation & Amortization	\$ 3,567,635	\$ 3,005,439	\$ 489,539	\$ 7,276	\$ 37,166
14	Income Taxes at Present Rates					
15	Commodity	\$ 154,794	\$ 12,374	\$ 127,282	\$ 3,047	\$ 12,091
16	Demand	273,717	21,880	225,067	5,389	21,381
17	Customer	141,206	11,288	116,109	2,780	11,030
18	Direct Private Fire	10,123	-	-	-	10,123
19	Total Income Taxes at Present Rates	\$ 579,840	\$ 45,542	\$ 468,457	\$ 11,216	\$ 44,502
20	Property Taxes					
21	Commodity	\$ 93,553	\$ 73,482	\$ 18,291	\$ 392	\$ 1,388
22	Demand	841,977	661,341	164,619	3,525	12,492
23	Customer	155,426	122,082	30,388	651	2,306
24	Direct Private Fire	3,779	-	-	-	3,779
25	Total Property Taxes	\$ 1,094,736	\$ 856,905	\$ 213,298	\$ 4,568	\$ 16,186
26	Other Taxes					
27	Commodity	\$ 92,169	\$ 71,106	\$ 19,243	\$ 479	\$ 1,341
28	Demand	100,847	83,852	15,555	205	1,235
29	Customer	64,279	60,944	3,253	23	60
30	Direct Private Fire	4	-	-	-	4
31	Total Other Taxes	\$ 257,300	\$ 215,902	\$ 38,051	\$ 707	\$ 2,636
32	Total Commodity at Present Rates	\$ 4,999,626	\$ 3,721,385	\$ 1,161,836	\$ 28,848	\$ 87,557
33	Total Demand at Present Rates	\$ 8,454,954	\$ 6,794,887	\$ 1,512,340	\$ 24,016	\$ 123,711
34	Total Customer at Present Rates	\$ 3,966,840	\$ 3,618,195	\$ 326,927	\$ 4,772	\$ 16,746
35	Total Direct Private Fire at Present Rates	\$ 42,298	\$ -	\$ -	\$ -	\$ 42,298
36	Total Operating Expenses at Present Rates	\$ 17,463,517	\$ 14,134,467	\$ 3,001,104	\$ 57,636	\$ 228,013
37	Income Taxes at Proposed Rates					
38	Commodity	\$ 754,364	\$ 482,260	\$ 246,661	\$ 4,484	\$ 20,960
39	Demand	1,188,236	756,353	390,377	7,122	34,384
40	Customer	594,903	376,491	197,272	3,487	17,654
41	Direct Private Fire	13,003	-	-	-	-
42	Total Income Taxes at Proposed Rates	\$ 2,550,507	\$ 1,616,489	\$ 834,359	\$ 15,093	\$ 72,990
43	Property Taxes at Proposed Rates					
44	Commodity	\$ 101,406	\$ 80,476	\$ 19,124	\$ 380	\$ 1,427
45	Demand	912,655	724,281	172,115	3,419	12,840
46	Customer	170,261	129,244	37,179	621	3,217
47	Direct Private Fire	3,584	-	-	-	3,584
48	Total Property Taxes at Proposed Rates	\$ 1,187,906	\$ 934,000	\$ 228,419	\$ 4,420	\$ 17,484
49	Total Commodity at Proposed Rates	\$ 5,607,049	\$ 4,198,264	\$ 1,282,048	\$ 30,272	\$ 96,464
50	Total Demand at Proposed Rates	\$ 9,440,151	\$ 7,592,298	\$ 1,685,146	\$ 25,643	\$ 137,063
51	Total Customer at Proposed Rates	\$ 4,435,171	\$ 3,990,560	\$ 414,882	\$ 5,449	\$ 24,280
52	Total Direct Private Fire at Proposed Rates	\$ 44,983	\$ -	\$ -	\$ -	\$ 44,983
53	Total Operating Expenses at Proposed Rates	\$ 19,527,353	\$ 15,782,509	\$ 3,382,125	\$ 61,365	\$ 257,799
54						
55						

Supporting Schedules:  
G-5 Rebuttal, G-7 RebuttalN:\2011\_Rate\_Case\Schedules\Eastern Group\2011 AWC Rate Case Model REBUTTAL SCHEDULES AWC EG 03.30.12 900am.xlsx\G4  
Processing Date: 3/30/2012 11:10 AMRecap Schedules:  
G-1 Rebuttal, G-2 Rebuttal

**ARIZONA WATER COMPANY**

Test Year Ended December 31, 2010

Allocation of Operating Expenses to Classes of Service - Detail

		Eastern Group					
Line		(A)	(B)	(C)	(D)	(E)	(F)
No.		Adjusted Total - Rebuttal	Residential	Commercial	Industrial	Other	Direct Private Fire
1	Operating Expenses						
2	Operations & Maintenance Expense						
3	Source of Supply Expenses						
4	Commodity	\$ 895,644	\$ 718,872	\$ 163,402	\$ 4,669	\$ 8,702	\$ -
5	Demand	204,248	169,795	31,626	367	2,461	-
6	Customer	-	-	-	-	-	-
7	Direct Private Fire	-	-	-	-	-	-
8	Subtotal Source of Supply Expenses	\$ 1,099,892	\$ 888,666	\$ 195,028	\$ 5,036	\$ 11,162	\$ -
9	Pumping Expenses						
10	Commodity	1,992,988	1,481,160	462,946	10,115	38,767	-
11	Demand	896,827	745,202	138,744	1,796	11,085	-
12	Customer	-	-	-	-	-	-
13	Direct Private Fire	-	-	-	-	-	-
14	Subtotal Pumping Expenses	\$ 2,889,815	\$ 2,226,362	\$ 601,690	\$ 11,911	\$ 49,853	\$ -
15	Water Treatment Expenses						
16	Commodity	667,872	519,018	136,210	4,164	8,481	-
17	Demand	74,208	62,084	11,082	172	871	-
18	Customer	-	-	-	-	-	-
19	Direct Private Fire	-	-	-	-	-	-
20	Subtotal Water Treatment Expenses	\$ 742,080	\$ 581,101	\$ 147,292	\$ 4,336	\$ 9,351	\$ -
21	Transmission & Distribution Expenses						
22	Commodity	253,935	194,758	53,995	1,329	3,854	-
23	Demand	2,285,419	1,902,133	350,662	4,765	27,860	-
24	Customer	-	-	-	-	-	-
25	Direct Private Fire	-	-	-	-	-	-
26	Subtotal Trans. & Dist. Expenses	\$ 2,539,354	\$ 2,096,891	\$ 404,656	\$ 6,093	\$ 31,714	\$ -
27	Customer Accounting Expenses						
28	Commodity	-	-	-	-	-	-
29	Demand	-	-	-	-	-	-
30	Customer	1,750,244	1,661,246	86,740	625	1,633	-
31	Direct Private Fire	-	-	-	-	-	-
32	Subtotal Customer Accounting Exp.	\$ 1,750,244	\$ 1,661,246	\$ 86,740	\$ 625	\$ 1,633	\$ -
33	Sales Expenses						
34	Commodity	-	-	-	-	-	-
35	Demand	-	-	-	-	-	-
36	Customer	-	-	-	-	-	-
37	Direct Private Fire	-	-	-	-	-	-
38	Subtotal Sales Expenses	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
39	Administrative & General Expenses						
40	Commodity	560,468	431,311	117,870	3,009	8,279	-
41	Demand	1,183,902	987,030	180,022	2,426	14,424	-
42	Customer	1,198,073	1,138,072	58,460	432	1,108	-
43	Direct Private Fire	177	-	-	-	-	177
44	Subtotal A&G Expenses	\$ 2,942,621	\$ 2,556,413	\$ 356,351	\$ 5,867	\$ 23,811	\$ 177
45	Depreciation & Amortization Expenses						
46	Commodity	288,201	219,305	62,599	1,644	4,653	-
47	Demand	2,593,808	2,161,571	394,963	5,371	31,903	-
48	Customer	657,412	624,564	31,978	261	609	-
49	Direct Private Fire	28,214	-	-	-	-	28,214
50	Subtotal Depreciation & Amortization	\$ 3,567,635	\$ 3,005,439	\$ 489,539	\$ 7,276	\$ 37,166	\$ 28,214
51	Other Taxes						
52	Commodity	92,169	71,106	19,243	479	1,341	-
53	Demand	100,847	83,852	15,555	205	1,235	-
54	Customer	64,279	60,944	3,253	23	60	-
55	Direct Private Fire	4	-	-	-	-	4
	Subtotal Other Taxes	\$ 257,300	\$ 215,902	\$ 38,051	\$ 707	\$ 2,636	\$ 4

**ARIZONA WATER COMPANY**

Test Year Ended December 31, 2010

Allocation of Operating Expenses to Classes of Service - Summary

		Superstition (Apache Junction, Superior, Miami)					
		[A]	[B]	[C]	[D]	[E]	[F]
		Adjusted Total - Rebuttal	Residential	Commercial	Industrial	Other	Direct Private Fire
Operating Expenses at Present Rates							
Operations & Maintenance Expense							
No.							
1							
2	Commodity	\$ 3,071,653	\$ 2,406,678	\$ 607,689	\$ 22,772	\$ 34,513	\$ -
3	Demand	3,216,524	2,726,030	446,521	7,398	36,574	-
4	Customer	2,010,938	1,927,649	80,737	766	1,787	-
5	Direct Private Fire	110	-	-	-	-	110
6	Total Operations & Maintenance	\$ 8,299,226	\$ 7,060,358	\$ 1,134,948	\$ 30,935	\$ 72,874	\$ 110
Depreciation & Amortization Expenses							
7							
8	Commodity	\$ 216,336	\$ 189,502	\$ 42,800	\$ 1,604	\$ 2,431	\$ -
9	Demand	1,947,026	1,650,121	270,288	4,478	22,139	-
10	Customer	489,055	468,799	19,635	186	434	-
11	Direct Private Fire	19,278	-	-	-	-	19,278
12	Total Depreciation & Amortization	\$ 2,671,695	\$ 2,288,422	\$ 332,723	\$ 6,268	\$ 25,004	\$ 19,278
Income Taxes at Present Rates							
13							
14	Commodity	\$ 157,228	\$ 47,283	\$ 101,126	\$ 3,188	\$ 5,631	\$ -
15	Demand	246,916	74,255	158,812	5,006	8,843	-
16	Customer	119,547	35,951	76,891	2,424	4,282	-
17	Direct Private Fire	8,831	-	-	-	-	8,831
18	Total Income Taxes at Present Rates	\$ 532,523	\$ 157,489	\$ 336,829	\$ 10,617	\$ 18,756	\$ 8,831
Property Taxes							
19							
20	Commodity	\$ 73,640	\$ 58,979	\$ 13,442	\$ 362	\$ 857	\$ -
21	Demand	662,756	530,809	120,976	3,256	7,714	-
22	Customer	108,225	86,679	19,755	532	1,260	-
23	Direct Private Fire	3,028	-	-	-	-	3,028
24	Total Property Taxes	\$ 847,648	\$ 676,466	\$ 154,173	\$ 4,149	\$ 9,831	\$ 3,028
Other Taxes							
25							
26	Commodity	\$ 63,099	\$ 49,439	\$ 12,483	\$ 468	\$ 709	\$ -
27	Demand	66,075	55,999	9,173	152	751	-
28	Customer	41,309	39,598	1,659	16	37	-
29	Direct Private Fire	2	-	-	-	-	2
30	Total Other Taxes	\$ 170,486	\$ 145,036	\$ 23,314	\$ 635	\$ 1,497	\$ 2
31	Total Commodity at Present Rates	\$ 3,581,957	\$ 2,731,881	\$ 777,541	\$ 28,393	\$ 44,142	\$ -
32	Total Demand at Present Rates	6,139,296	5,037,214	1,005,770	20,289	76,023	-
33	Total Customer at Present Rates	2,769,075	2,558,677	198,676	3,923	7,799	-
34	Total Direct Private Fire at Present Rates	31,250	-	-	-	-	31,250
35	Total Operating Expenses at Present Rates	\$ 12,521,578	\$ 10,327,772	\$ 1,981,987	\$ 52,605	\$ 127,964	\$ 31,250
36							
Income Taxes at Proposed Rates							
37							
38	Commodity	\$ 603,388	\$ 416,983	\$ 170,913	\$ 4,239	\$ 11,253	\$ -
39	Demand	947,578	654,842	268,406	6,657	17,672	-
40	Customer	458,781	317,050	129,952	3,223	8,556	-
41	Direct Private Fire	10,254	-	-	-	-	10,254
42	Total Income Taxes at Proposed Rates	\$ 2,020,001	\$ 1,388,875	\$ 569,271	\$ 14,120	\$ 37,481	\$ 10,254
Property Taxes at Proposed Rates							
43							
44	Commodity	\$ 80,087	\$ 64,618	\$ 14,171	\$ 350	\$ 949	\$ -
45	Demand	720,786	581,565	127,537	3,147	8,537	-
46	Customer	117,701	94,967	20,826	514	1,394	-
47	Direct Private Fire	2,777	-	-	-	-	2,777
48	Total Property Taxes at Proposed Rates	\$ 921,351	\$ 741,150	\$ 162,533	\$ 4,010	\$ 10,880	\$ 2,777
49							
50	Total Commodity at Proposed Rates	\$ 4,034,564	\$ 3,107,221	\$ 848,056	\$ 29,432	\$ 49,855	\$ -
51	Total Demand at Proposed Rates	6,897,988	5,668,557	1,121,925	21,832	85,674	-
52	Total Customer at Proposed Rates	3,117,784	2,848,063	252,809	4,705	12,208	-
53	Total Direct Private Fire at Proposed Rates	32,421	-	-	-	-	32,421
54	Total Operating Expenses at Proposed Rates	\$ 14,082,758	\$ 11,623,842	\$ 2,222,789	\$ 55,969	\$ 147,737	\$ 32,421
55							

## ARIZONA WATER COMPANY

Test Year Ended December 31, 2010

Allocation of Operating Expenses to Classes of Service - Detail

Exhibit  
Schedule G-4 Rebuttal  
Page 4 of 14  
Witness: Reiker

		Superstition (Apache Junction, Superior, Miami)					
		[A]	[B]	[C]	[D]	[E]	[F]
		Adjusted					
		Total -					
		Rebuttal	Residential	Commercial	Industrial	Other	Direct
							Private Fire
Line No.	Operating Expenses						
1	Operations & Maintenance Expense						
2	Source of Supply Expenses						
3	Commodity	\$ 629,624	\$ 493,318	\$ 124,563	\$ 4,668	\$ 7,075	\$ -
4	Demand	134,884	114,315	18,725	310	1,534	-
5	Customer	-	-	-	-	-	-
6	Direct Private Fire	-	-	-	-	-	-
7	Subtotal Source of Supply Expenses	\$ 764,507	\$ 607,633	\$ 143,288	\$ 4,978	\$ 8,608	\$ -
8	Pumping Expenses						
9	Commodity	1,337,303	1,047,794	264,569	9,914	15,026	-
10	Demand	635,349	538,464	88,200	1,461	7,224	-
11	Customer	-	-	-	-	-	-
12	Direct Private Fire	-	-	-	-	-	-
13	Subtotal Pumping Expenses	\$ 1,972,652	\$ 1,586,257	\$ 352,769	\$ 11,375	\$ 22,251	\$ -
14	Water Treatment Expenses						
15	Commodity	537,059	420,793	106,251	3,982	6,034	-
16	Demand	59,673	50,574	8,284	137	679	-
17	Customer	-	-	-	-	-	-
18	Direct Private Fire	-	-	-	-	-	-
19	Subtotal Water Treatment Expenses	\$ 596,732	\$ 471,366	\$ 114,535	\$ 4,119	\$ 6,713	\$ -
20	Transmission & Distribution Expenses						
21	Commodity	172,790	135,383	34,184	1,281	1,941	-
22	Demand	1,555,110	1,317,969	215,882	3,577	17,683	-
23	Customer	-	-	-	-	-	-
24	Direct Private Fire	-	-	-	-	-	-
25	Subtotal Trans. & Dist. Expenses	\$ 1,727,900	\$ 1,453,352	\$ 250,066	\$ 4,858	\$ 19,624	\$ -
26	Customer Accounting Expenses						
27	Commodity	-	-	-	-	-	-
28	Demand	-	-	-	-	-	-
29	Customer	1,168,726	1,120,319	46,923	445	1,038	-
30	Direct Private Fire	-	-	-	-	-	-
31	Subtotal Customer Accounting Exp.	\$ 1,168,726	\$ 1,120,319	\$ 46,923	\$ 445	\$ 1,038	\$ -
32	Sales Expenses						
33	Commodity	-	-	-	-	-	-
34	Demand	-	-	-	-	-	-
35	Customer	-	-	-	-	-	-
36	Direct Private Fire	-	-	-	-	-	-
37	Subtotal Sales Expenses	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
38	Administrative & General Expenses						
39	Commodity	394,878	309,391	78,122	2,927	4,437	-
40	Demand	831,508	704,710	115,431	1,912	9,455	-
41	Customer	842,213	807,330	33,814	321	748	-
42	Direct Private Fire	110	-	-	-	-	110
43	Subtotal A&G Expenses	\$ 2,068,708	\$ 1,821,431	\$ 227,366	\$ 5,161	\$ 14,640	\$ 110
44	Depreciation & Amortization Expenses						
45	Commodity	216,336	169,502	42,800	1,604	2,431	-
46	Demand	1,947,026	1,650,121	270,288	4,478	22,139	-
47	Customer	489,055	468,799	19,635	186	434	-
48	Direct Private Fire	19,278	-	-	-	-	19,278
49	Subtotal Depreciation & Amortization	\$ 2,671,695	\$ 2,288,422	\$ 332,723	\$ 6,268	\$ 25,004	\$ 19,278
50	Other Taxes						
51	Commodity	63,099	49,439	12,483	488	709	-
52	Demand	66,075	55,999	9,173	152	751	-
53	Customer	41,308	39,598	1,659	16	37	-
54	Direct Private Fire	2	-	-	-	-	2
	Subtotal Other Taxes	\$ 170,486	\$ 145,036	\$ 23,314	\$ 635	\$ 1,497	\$ 2

Supporting Schedules:  
G-5 Rebuttal, G-7 Rebuttal

N:\2011\_Rate\_Case\Schedules\Eastern Group\2011 AWC Rate Case Model REBUTTAL SCHEDULES AWC EG 03 30 12 900am.xlsxG4  
Processing Date: 3/30/2012 11:10 AM

Recap Schedules:  
G-1 Rebuttal, G-2 Rebuttal

**ARIZONA WATER COMPANY**

Test Year Ended December 31, 2010  
Allocation of Operating Expenses to Classes of Service - Summary

Schedule G-4 Rebuttal  
Page 5 of 14  
Witness: Reiker

		Cochise (Bisbee, Sierra Vista)					
		[A]	[B]	[C]	[D]	[E]	[F]
Line No.		Adjusted Total - Rebuttal	Residential	Commercial	Industrial	Other	Direct Private Fire
Operating Expenses at Present Rates							
Operations & Maintenance Expense							
1	Commodity	\$ 652,398	\$ 459,332	\$ 175,040	\$ 38	\$ 17,988	\$ -
2	Demand	910,259	724,271	173,118	1,252	11,618	-
3	Customer	584,804	541,006	43,093	184	521	-
4	Direct Private Fire	66	-	-	-	-	66
5	Total Operations & Maintenance	\$ 2,147,527	\$ 1,724,610	\$ 391,251	\$ 1,474	\$ 30,126	\$ 66
Depreciation & Amortization Expenses							
6	Commodity	\$ 37,644	\$ 26,504	\$ 10,100	\$ 2	\$ 1,038	\$ -
7	Demand	338,795	269,571	64,434	466	4,324	-
8	Customer	111,105	102,784	8,187	35	99	-
9	Direct Private Fire	8,559	-	-	-	-	8,559
10	Total Depreciation & Amortization	\$ 496,103	\$ 398,859	\$ 82,721	\$ 503	\$ 5,461	\$ 8,559
Income Taxes at Present Rates							
11	Commodity	\$ 17,817	\$ (19,607)	\$ 30,830	\$ 94	\$ 6,500	\$ -
12	Demand	32,251	(35,491)	55,806	171	11,765	-
13	Customer	17,969	(19,774)	31,092	95	6,555	-
14	Direct Private Fire	1,193	-	-	-	-	1,193
15	Total Income Taxes at Present Rates	\$ 69,230	\$ (74,871)	\$ 117,727	\$ 360	\$ 24,820	\$ 1,193
Property Taxes							
16	Commodity	\$ 11,126	\$ 7,787	\$ 2,960	\$ 11	\$ 367	\$ -
17	Demand	100,130	70,079	26,643	103	3,305	-
18	Customer	29,075	20,349	7,736	30	960	-
19	Direct Private Fire	720	-	-	-	-	720
20	Total Property Taxes	\$ 141,051	\$ 98,214	\$ 37,340	\$ 145	\$ 4,633	\$ 720
Other Taxes							
21	Commodity	\$ 17,494	\$ 12,317	\$ 4,694	\$ 1	\$ 482	\$ -
22	Demand	24,408	19,421	4,642	34	312	-
23	Customer	15,681	14,507	1,156	5	14	-
24	Direct Private Fire	2	-	-	-	-	2
25	Total Other Taxes	\$ 57,585	\$ 46,244	\$ 10,491	\$ 40	\$ 808	\$ 2
26	Total Commodity at Present Rates	\$ 736,478	\$ 486,333	\$ 223,624	\$ 147	\$ 26,375	\$ -
27	Total Demand at Present Rates	1,405,843	1,047,851	324,642	2,026	31,324	-
28	Total Customer at Present Rates	758,633	658,872	91,264	349	8,148	-
29	Total Direct Private Fire at Present Rates	10,540	-	-	-	-	10,540
30	Total Operating Expenses at Present Rates	\$ 2,911,495	\$ 2,193,056	\$ 639,530	\$ 2,521	\$ 65,847	\$ 10,540
Income Taxes at Proposed Rates							
31	Commodity	\$ 87,729	\$ 34,222	\$ 46,135	\$ 150	\$ 7,222	\$ -
32	Demand	158,799	61,945	83,510	272	13,072	-
33	Customer	88,475	34,513	46,527	152	7,283	-
34	Direct Private Fire	2,478	-	-	-	-	2,478
35	Total Income Taxes at Proposed Rates	\$ 337,481	\$ 130,680	\$ 176,172	\$ 574	\$ 27,577	\$ 2,478
Property Taxes at Proposed Rates							
36	Commodity	\$ 11,918	\$ 8,491	\$ 3,070	\$ 12	\$ 345	\$ -
37	Demand	107,259	76,420	27,630	106	3,103	-
38	Customer	31,145	22,191	8,023	31	901	-
39	Direct Private Fire	763	-	-	-	-	763
40	Total Property Taxes at Proposed Rates	\$ 151,085	\$ 107,102	\$ 38,723	\$ 149	\$ 4,348	\$ 763
Other Taxes at Proposed Rates							
41	Commodity at Proposed Rates	\$ 807,182	\$ 540,866	\$ 239,039	\$ 203	\$ 27,075	\$ -
42	Total Demand at Proposed Rates	1,539,520	1,151,629	353,334	2,130	32,428	-
43	Total Customer at Proposed Rates	831,210	715,000	106,986	406	8,818	-
44	Total Direct Private Fire at Proposed Rates	11,868	-	-	-	-	11,868
45	Total Operating Expenses at Proposed Rates	\$ 3,189,781	\$ 2,407,495	\$ 699,359	\$ 2,739	\$ 68,320	\$ 11,868



**ARIZONA WATER COMPANY**

Test Year Ended December 31, 2010

Allocation of Operating Expenses to Classes of Service - Detail

		Cochise (Bisbee, Sierra Vista)				
Line No.	Operating Expenses	(A) Adjusted Total - Rebuttal	(B)	(C)	(D)	(E) (F)
1	Operations & Maintenance Expense					
2	Source of Supply Expenses					
3	Commodity	\$ 3,641	\$ 2,564	\$ 977	\$ 0	\$ 100
4	Demand	32,769	26,074	6,232	45	418
5	Customer	-	-	-	-	-
6	Direct Private Fire	-	-	-	-	-
7	Subtotal Source of Supply Expenses	\$ 36,410	\$ 28,637	\$ 7,209	\$ 45	\$ 519
8	Pumping Expenses					
9	Commodity	417,878	294,214	112,118	24	11,522
10	Demand	136,973	108,986	26,050	188	1,748
11	Customer	-	-	-	-	-
12	Direct Private Fire	-	-	-	-	-
13	Subtotal Pumping Expenses	\$ 554,850	\$ 403,200	\$ 138,168	\$ 212	\$ 13,270
14	Water Treatment Expenses					
15	Commodity	67,196	47,311	18,029	4	1,853
16	Demand	7,466	5,941	1,420	10	95
17	Customer	-	-	-	-	-
18	Direct Private Fire	-	-	-	-	-
19	Subtotal Water Treatment Expenses	\$ 74,663	\$ 53,252	\$ 19,449	\$ 14	\$ 1,948
20	Transmission & Distribution Expenses					
21	Commodity	55,919	39,371	15,003	3	1,542
22	Demand	503,270	400,440	95,715	692	6,423
23	Customer	-	-	-	-	-
24	Direct Private Fire	-	-	-	-	-
25	Subtotal Trans. & Dist. Expenses	\$ 559,189	\$ 439,810	\$ 110,718	\$ 696	\$ 7,965
26	Customer Accounting Expenses					
27	Commodity	-	-	-	-	-
28	Demand	-	-	-	-	-
29	Customer	352,721	326,305	25,991	111	314
30	Direct Private Fire	-	-	-	-	-
31	Subtotal Customer Accounting Exp.	\$ 352,721	\$ 326,305	\$ 25,991	\$ 111	\$ 314
32	Sales Expenses					
33	Commodity	-	-	-	-	-
34	Demand	-	-	-	-	-
35	Customer	-	-	-	-	-
36	Direct Private Fire	-	-	-	-	-
37	Subtotal Sales Expenses	\$ -	\$ -	\$ -	\$ -	\$ -
38	Administrative & General Expenses					
39	Commodity	107,764	75,873	28,913	6	2,971
40	Demand	229,781	182,831	43,701	316	2,933
41	Customer	232,083	214,701	17,102	73	207
42	Direct Private Fire	66	-	-	-	66
43	Subtotal A&G Expenses	\$ 569,694	\$ 473,406	\$ 89,716	\$ 395	\$ 6,111
44	Depreciation & Amortization Expenses					
45	Commodity	37,644	26,504	10,100	2	1,038
46	Demand	338,795	269,571	64,434	466	4,324
47	Customer	111,105	102,784	8,187	35	99
48	Direct Private Fire	8,559	-	-	-	8,559
49	Subtotal Depreciation & Amortization	\$ 496,103	\$ 398,859	\$ 82,721	\$ 503	\$ 5,461
50	Other Taxes					
51	Commodity	17,494	12,317	4,694	1	482
52	Demand	24,408	19,421	4,642	34	312
53	Customer	15,681	14,507	1,156	5	14
54	Direct Private Fire	2	-	-	-	-
	Subtotal Other Taxes	\$ 57,585	\$ 46,244	\$ 10,491	\$ 40	\$ 808

## ARIZONA WATER COMPANY

Test Year Ended December 31, 2010

Allocation of Operating Expenses to Classes of Service - Summary

		San Manuel				
		(A)	(B)	(C)	(D)	(E) (F)
Line		Adjusted				
No.		Total -	Residential	Commercial	Industrial	Other Direct
1	Operating Expenses at Present Rates	Rebuttal				Private Fire
2	Operations & Maintenance Expense					
3	Commodity	\$ 374,106	\$ 318,010	\$ 53,932	\$ -	\$ 2,164
4	Demand	229,445	183,391	43,094	-	2,961
5	Customer	161,948	154,061	7,731	-	156
6	Direct Private Fire	0	-	-	-	-
7	Total Operations & Maintenance	\$ 765,499	\$ 655,462	\$ 104,756	\$ -	\$ 5,281
8	Depreciation & Amortization Expenses					
9	Commodity	\$ 9,622	\$ 8,179	\$ 1,387	\$ -	\$ 56
10	Demand	86,596	69,215	16,264	-	1,117
11	Customer	16,734	15,919	799	-	16
12	Direct Private Fire	3	-	-	-	-
13	Total Depreciation & Amortization	\$ 112,956	\$ 93,313	\$ 18,450	\$ -	\$ 1,189
14	Income Taxes at Present Rates					
15	Commodity	\$ (10,531)	\$ (13,565)	\$ 2,864	\$ -	\$ 170
16	Demand	(8,674)	(11,172)	2,359	-	140
17	Customer	(4,904)	(6,316)	1,334	-	79
18	Direct Private Fire	105	-	-	-	-
19	Total Income Taxes at Present Rates	\$ (24,004)	\$ (31,053)	\$ 6,556	\$ -	\$ 388
20	Property Taxes					
21	Commodity	\$ 4,450	\$ 3,648	\$ 761	\$ -	\$ 41
22	Demand	40,052	32,828	6,853	-	371
23	Customer	4,694	3,847	803	-	44
24	Direct Private Fire	15	-	-	-	-
25	Total Property Taxes	\$ 49,211	\$ 40,323	\$ 8,417	\$ -	\$ 456
26	Other Taxes					
27	Commodity	\$ 7,152	\$ 6,080	\$ 1,031	\$ -	\$ 41
28	Demand	4,387	3,506	824	-	57
29	Customer	3,096	2,945	148	-	3
30	Direct Private Fire	0	-	-	-	-
31	Total Other Taxes	\$ 14,635	\$ 12,532	\$ 2,003	\$ -	\$ 101
32	Total Commodity at Present Rates	\$ 384,799	\$ 322,352	\$ 59,975	\$ -	\$ 2,472
33	Total Demand at Present Rates	\$ 351,807	\$ 277,767	\$ 69,394	\$ -	\$ 4,646
34	Total Customer at Present Rates	\$ 181,569	\$ 170,457	\$ 10,814	\$ -	\$ 298
35	Total Direct Private Fire at Present Rates	\$ 123	\$ -	\$ -	\$ -	\$ -
36	Total Operating Expenses at Present Rates	\$ 918,298	\$ 770,576	\$ 140,183	\$ -	\$ 7,416
37	Income Taxes at Proposed Rates					
38	Commodity	\$ 48,206	\$ 28,865	\$ 18,361	\$ -	\$ 980
39	Demand	39,703	23,774	15,122	-	807
40	Customer	22,447	13,441	8,550	-	456
41	Direct Private Fire	121	-	-	-	-
42	Total Income Taxes at Proposed Rates	\$ 110,476	\$ 66,080	\$ 42,032	\$ -	\$ 2,243
43	Property Taxes at Proposed Rates					
44	Commodity	\$ 4,883	\$ 3,869	\$ 962	\$ -	\$ 51
45	Demand	43,944	34,822	8,659	-	463
46	Customer	5,150	4,081	1,015	-	54
47	Direct Private Fire	14	-	-	-	-
48	Total Property Taxes at Proposed Rates	\$ 53,990	\$ 42,772	\$ 10,636	\$ -	\$ 569
49	Total Commodity at Proposed Rates	\$ 443,969	\$ 365,004	\$ 75,673	\$ -	\$ 3,292
50	Total Demand at Proposed Rates	\$ 404,075	\$ 314,707	\$ 83,963	\$ -	\$ 5,405
51	Total Customer at Proposed Rates	\$ 209,376	\$ 190,448	\$ 18,242	\$ -	\$ 686
52	Total Direct Private Fire at Proposed Rates	\$ 137	\$ -	\$ -	\$ -	\$ -
53	Total Operating Expenses at Proposed Rates	\$ 1,057,557	\$ 870,159	\$ 177,877	\$ -	\$ 9,384
54						
55						

**ARIZONA WATER COMPANY**

Test Year Ended December 31, 2010

Allocation of Operating Expenses to Classes of Service - Detail

		San Manuel					
Line No.		[A] Adjusted Total - Rebuttal	[B]	[C]	[D]	[E]	[F]
Operating Expenses							
Operations & Maintenance Expense							
Source of Supply Expenses							
1	Commodity	\$ 261,801	\$ 222,545	\$ 37,742	\$ -	\$ 1,514	\$ -
2	Demand	31,391	25,090	5,896	-	405	-
3	Customer	-	-	-	-	-	-
4	Direct Private Fire	-	-	-	-	-	-
5	Subtotal Source of Supply Expenses	\$ 293,192	\$ 247,635	\$ 43,638	\$ -	\$ 1,919	\$ -
6	Pumping Expenses						
7	Commodity	35,645	30,300	5,139	-	206	-
8	Demand	47,706	38,130	8,960	-	616	-
9	Customer	-	-	-	-	-	-
10	Direct Private Fire	-	-	-	-	-	-
11	Subtotal Pumping Expenses	\$ 83,351	\$ 68,431	\$ 14,099	\$ -	\$ 822	\$ -
12	Water Treatment Expenses						
13	Commodity	41,074	34,915	5,921	-	238	-
14	Demand	4,564	3,648	857	-	59	-
15	Customer	-	-	-	-	-	-
16	Direct Private Fire	-	-	-	-	-	-
17	Subtotal Water Treatment Expenses	\$ 45,638	\$ 38,563	\$ 6,779	\$ -	\$ 296	\$ -
18	Transmission & Distribution Expenses						
19	Commodity	10,226	8,693	1,474	-	59	-
20	Demand	92,036	73,563	17,286	-	1,188	-
21	Customer	-	-	-	-	-	-
22	Direct Private Fire	-	-	-	-	-	-
23	Subtotal Trans. & Dist. Expenses	\$ 102,263	\$ 82,256	\$ 18,760	\$ -	\$ 1,247	\$ -
24	Customer Accounting Expenses						
25	Commodity	-	-	-	-	-	-
26	Demand	-	-	-	-	-	-
27	Customer	-	-	-	-	-	-
28	Direct Private Fire	107,676	102,432	5,140	-	104	-
29	Subtotal Customer Accounting Exp.	\$ 107,676	\$ 102,432	\$ 5,140	\$ -	\$ 104	\$ -
30	Sales Expenses						
31	Commodity	-	-	-	-	-	-
32	Demand	-	-	-	-	-	-
33	Customer	-	-	-	-	-	-
34	Direct Private Fire	-	-	-	-	-	-
35	Subtotal Sales Expenses	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
36	Administrative & General Expenses						
37	Commodity	25,359	21,556	3,656	-	147	-
38	Demand	53,748	42,960	10,095	-	694	-
39	Customer	54,272	51,629	2,591	-	52	-
40	Direct Private Fire	0	-	-	-	-	0
41	Subtotal A&G Expenses	\$ 133,379	\$ 116,145	\$ 16,341	\$ -	\$ 893	\$ 0
42	Depreciation & Amortization Expenses						
43	Commodity	9,622	8,179	1,387	-	56	-
44	Demand	86,596	69,215	16,264	-	1,117	-
45	Customer	16,734	15,919	799	-	16	-
46	Direct Private Fire	3	-	-	-	-	3
47	Subtotal Depreciation & Amortization	\$ 112,956	\$ 93,313	\$ 18,450	\$ -	\$ 1,189	\$ 3
48	Other Taxes						
49	Commodity	7,152	6,080	1,031	-	41	-
50	Demand	4,387	3,506	824	-	57	-
51	Customer	3,096	2,945	148	-	3	-
52	Direct Private Fire	0	-	-	-	-	0
53	Subtotal Other Taxes	\$ 14,635	\$ 12,532	\$ 2,003	\$ -	\$ 101	\$ 0
54							

## ARIZONA WATER COMPANY

Test Year Ended December 31, 2010

Allocation of Operating Expenses to Classes of Service - Summary

		Oracle					[F]
		[A]	[B]	[C]	[D]	[E]	
Line		Adjusted Total - Rebuttal	Residential	Commercial	Industrial	Other	Direct Private Fire
No.							
1	Operating Expenses at Present Rates						
2	Operations & Maintenance Expense						
3	Commodity	\$ 156,594	\$ 127,395	\$ 26,284	\$ -	\$ 2,914	\$ -
4	Demand	225,107	192,683	27,591	-	4,833	-
5	Customer	161,850	151,298	10,301	-	250	-
6	Direct Private Fire	-	-	-	-	-	-
7	Total Operations & Maintenance	\$ 543,550	\$ 471,376	\$ 64,177	\$ -	\$ 7,997	\$ -
8	Depreciation & Amortization Expenses						
9	Commodity	\$ 15,251	\$ 12,407	\$ 2,560	\$ -	\$ 284	\$ -
10	Demand	137,260	117,489	16,824	-	2,947	-
11	Customer	24,644	23,038	1,569	-	38	-
12	Direct Private Fire	-	-	-	-	-	-
13	Total Depreciation & Amortization	\$ 177,155	\$ 152,934	\$ 20,952	\$ -	\$ 3,269	\$ -
14	Income Taxes at Present Rates						
15	Commodity	\$ 11,965	\$ 6,349	\$ 5,049	\$ -	\$ 567	\$ -
16	Demand	25,231	13,388	10,647	-	1,196	-
17	Customer	12,985	6,890	5,480	-	616	-
18	Direct Private Fire	106	-	-	-	-	106
19	Total Income Taxes at Present Rates	\$ 50,288	\$ 26,626	\$ 21,176	\$ -	\$ 2,379	\$ 106
20	Property Taxes						
21	Commodity	\$ 3,859	\$ 3,163	\$ 618	\$ -	\$ 78	\$ -
22	Demand	34,730	28,465	5,559	-	705	-
23	Customer	4,247	3,481	680	-	86	-
24	Direct Private Fire	12	-	-	-	-	12
25	Total Property Taxes	\$ 42,848	\$ 35,109	\$ 6,857	\$ -	\$ 870	\$ 12
26	Other Taxes						
27	Commodity	\$ 3,655	\$ 2,974	\$ 614	\$ -	\$ 68	\$ -
28	Demand	5,255	4,498	644	-	113	-
29	Customer	3,778	3,532	240	-	6	-
30	Direct Private Fire	-	-	-	-	-	-
31	Total Other Taxes	\$ 12,688	\$ 11,003	\$ 1,498	\$ -	\$ 187	\$ -
32	Total Commodity at Present Rates	\$ 191,324	\$ 152,287	\$ 35,125	\$ -	\$ 3,912	\$ -
33	Total Demand at Present Rates	427,582	356,523	61,265	-	9,794	-
34	Total Customer at Present Rates	207,505	188,239	18,270	-	996	-
35	Total Direct Private Fire at Present Rates	118	-	-	-	-	118
36	Total Operating Expenses at Present Rates	\$ 826,530	\$ 697,049	\$ 114,660	\$ -	\$ 14,702	\$ 118
37	Income Taxes at Proposed Rates						
38	Commodity	\$ 21,890	\$ 11,852	\$ 8,846	\$ -	\$ 1,192	\$ -
39	Demand	46,160	24,992	18,654	-	2,514	-
40	Customer	23,756	12,862	9,600	-	1,294	-
41	Direct Private Fire	122	-	-	-	-	122
42	Total Income Taxes at Proposed Rates	\$ 91,929	\$ 49,706	\$ 37,101	\$ -	\$ 5,000	\$ 122
43	Property Taxes at Proposed Rates						
44	Commodity	\$ 4,029	\$ 3,193	\$ 737	\$ -	\$ 99	\$ -
45	Demand	36,259	28,736	6,629	-	894	-
46	Customer	4,434	3,514	811	-	109	-
47	Direct Private Fire	13	-	-	-	-	13
48	Total Property Taxes at Proposed Rates	\$ 44,735	\$ 35,443	\$ 8,176	\$ -	\$ 1,103	\$ 13
49	Total Commodity at Proposed Rates	\$ 201,419	\$ 157,820	\$ 39,041	\$ -	\$ 4,558	\$ -
50	Total Demand at Proposed Rates	450,040	368,398	70,342	-	11,301	-
51	Total Customer at Proposed Rates	218,463	194,244	22,521	-	1,698	-
52	Total Direct Private Fire at Proposed Rates	136	-	-	-	-	136
53	Total Operating Expenses at Proposed Rates	\$ 870,058	\$ 720,462	\$ 131,904	\$ -	\$ 17,556	\$ 136
54							
55							

Oracle							
Line No.		(A)	(B)	(C)	(D)	(E)	(F)
	Operating Expenses	Adjusted					
	Operations & Maintenance Expense	Total -					
	Source of Supply Expenses	Rebuttal	Residential	Commercial	Industrial	Other	Direct Private Fire
1							
2	Commodity	\$ 515	\$ 419	\$ 86	\$ -	\$ 10	\$ -
3	Demand	4,637	3,969	568	-	100	-
4	Customer	-	-	-	-	-	-
5	Direct Private Fire	-	-	-	-	-	-
6	Subtotal Source of Supply Expenses						
7	Pumping Expenses	\$ 5,153	\$ 4,389	\$ 655	\$ -	\$ 109	\$ -
8	Commodity	100,461	81,729	16,863	-	1,870	-
9	Demand	46,102	39,462	5,651	-	990	-
10	Customer	-	-	-	-	-	-
11	Direct Private Fire	-	-	-	-	-	-
12	Subtotal Pumping Expenses						
13	Water Treatment Expenses	\$ 146,564	\$ 121,191	\$ 22,513	\$ -	\$ 2,859	\$ -
14	Commodity	15,246	12,403	2,559	-	284	-
15	Demand	1,694	1,450	208	-	36	-
16	Customer	-	-	-	-	-	-
17	Direct Private Fire	-	-	-	-	-	-
18	Subtotal Water Treatment Expenses						
19	Transmission & Distribution Expenses	\$ 16,940	\$ 13,853	\$ 2,767	\$ -	\$ 320	\$ -
20	Commodity	12,636	10,280	2,121	-	235	-
21	Demand	113,723	97,343	13,939	-	2,442	-
22	Customer	-	-	-	-	-	-
23	Direct Private Fire	-	-	-	-	-	-
24	Subtotal Trans. & Dist. Expenses						
25	Customer Accounting Expenses	\$ 126,359	\$ 107,623	\$ 16,060	\$ -	\$ 2,677	\$ -
26	Commodity	-	-	-	-	-	-
27	Demand	-	-	-	-	-	-
28	Customer	102,400	95,724	6,517	-	158	-
29	Direct Private Fire	-	-	-	-	-	-
30	Subtotal Customer Accounting Exp.						
31	Sales Expenses	\$ 102,400	\$ 95,724	\$ 6,517	\$ -	\$ 158	\$ -
32	Commodity	-	-	-	-	-	-
33	Demand	-	-	-	-	-	-
34	Customer	-	-	-	-	-	-
35	Direct Private Fire	-	-	-	-	-	-
36	Subtotal Sales Expenses						
37	Administrative & General Expenses	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
38	Commodity	27,735	22,564	4,655	-	516	-
39	Demand	58,950	50,459	7,225	-	1,266	-
40	Customer	59,450	55,574	3,784	-	92	-
41	Direct Private Fire	-	-	-	-	-	-
42	Subtotal A&G Expenses						
43	Depreciation & Amortization Expenses	\$ 146,136	\$ 128,597	\$ 15,665	\$ -	\$ 1,874	\$ -
44	Commodity	15,251	12,407	2,560	-	284	-
45	Demand	137,260	117,489	16,824	-	2,947	-
46	Customer	24,644	23,038	1,569	-	38	-
47	Direct Private Fire	-	-	-	-	-	-
48	Subtotal Depreciation & Amortization						
49	Other Taxes	\$ 177,155	\$ 152,934	\$ 20,952	\$ -	\$ 3,269	\$ -
50	Commodity	3,655	2,974	614	-	68	-
51	Demand	5,255	4,498	644	-	113	-
52	Customer	3,778	3,532	240	-	6	-
53	Direct Private Fire	-	-	-	-	-	-
54	Subtotal Other Taxes						
		\$ 12,688	\$ 11,003	\$ 1,498	\$ -	\$ 187	\$ -

**ARIZONA WATER COMPANY**

Test Year Ended December 31, 2010  
Allocation of Operating Expenses to Classes of Service - Summary

		SaddleBrooke Ranch					
		[A]	[B]	[C]	[D]	[E]	[F]
		Adjusted Total -					
		Rebuttal	Residential	Commercial	Industrial	Other	Direct Private Fire
Operating Expenses at Present Rates							
Operations & Maintenance Expense							
Commodity		\$ 98,524	\$ 24,573	\$ 63,448	\$ -	\$ 10,503	\$ -
Demand		37,074	24,866	11,494	-	715	-
Customer		12,170	10,854	1,290	-	27	-
Direct Private Fire		0	-	-	-	-	0
Total Operations & Maintenance		\$ 147,769	\$ 60,293	\$ 76,231	\$ -	\$ 11,245	\$ 0
Depreciation & Amortization Expenses							
Commodity		\$ 7,929	\$ 1,978	\$ 5,106	\$ -	\$ 845	\$ -
Demand		71,359	47,861	22,123	-	1,376	-
Customer		9,767	8,711	1,035	-	22	-
Direct Private Fire		374	-	-	-	-	374
Total Depreciation & Amortization		\$ 89,429	\$ 58,549	\$ 28,264	\$ -	\$ 2,242	\$ 374
Income Taxes at Present Rates							
Commodity		\$ (21,764)	\$ (13,066)	\$ (7,870)	\$ -	\$ (828)	\$ -
Demand		(22,169)	(13,309)	(8,016)	-	(843)	-
Customer		(4,485)	(2,693)	(1,622)	-	(171)	-
Direct Private Fire		(113)	-	-	-	-	(113)
Total Income Taxes at Present Rates		\$ (48,530)	\$ (29,068)	\$ (17,508)	\$ -	\$ (1,842)	\$ (113)
Property Taxes							
Commodity		\$ (152)	\$ (59)	\$ (81)	\$ -	\$ (12)	\$ -
Demand		(1,366)	(534)	(725)	-	(107)	-
Customer		6,581	2,573	3,494	-	515	-
Direct Private Fire		4	-	-	-	-	4
Total Property Taxes		\$ 5,068	\$ 1,980	\$ 2,688	\$ -	\$ 396	\$ 4
Other Taxes							
Commodity		\$ 378	\$ 94	\$ 244	\$ -	\$ 40	\$ -
Demand		142	95	44	-	3	-
Customer		47	42	5	-	0	-
Direct Private Fire		0	-	-	-	-	0
Total Other Taxes		\$ 567	\$ 231	\$ 293	\$ -	\$ 43	\$ 0
Total Commodity at Present Rates		\$ 84,915	\$ 13,519	\$ 60,847	\$ -	\$ 10,549	\$ -
Total Demand at Present Rates		\$ 85,041	\$ 58,979	\$ 24,919	\$ -	\$ 1,143	\$ -
Total Customer at Present Rates		\$ 24,081	\$ 19,487	\$ 4,201	\$ -	\$ 393	\$ -
Total Direct Private Fire at Present Rates		\$ 265	\$ -	\$ -	\$ -	\$ -	\$ 265
Total Operating Expenses at Present Rates		\$ 194,302	\$ 91,985	\$ 89,967	\$ -	\$ 12,085	\$ 265
Income Taxes at Proposed Rates							
Commodity		\$ (9,746)	\$ (10,288)	\$ 229	\$ -	\$ 313	\$ -
Demand		(9,927)	(10,479)	233	-	319	-
Customer		(2,008)	(2,120)	47	-	65	-
Direct Private Fire		29	-	-	-	-	29
Total Income Taxes at Proposed Rates		\$ (21,652)	\$ (22,887)	\$ 509	\$ -	\$ 697	\$ 29
Property Taxes at Proposed Rates							
Commodity		\$ (206)	\$ (68)	\$ (121)	\$ -	\$ (17)	\$ -
Demand		(1,858)	(613)	(1,088)	-	(157)	-
Customer		8,956	2,954	5,244	-	758	-
Direct Private Fire		17	-	-	-	-	17
Total Property Taxes at Proposed Rates		\$ 6,908	\$ 2,273	\$ 4,035	\$ -	\$ 583	\$ 17
Total Commodity at Proposed Rates		\$ 96,879	\$ 16,289	\$ 68,905	\$ -	\$ 11,684	\$ -
Total Demand at Proposed Rates		\$ 96,790	\$ 61,730	\$ 32,805	\$ -	\$ 2,255	\$ -
Total Customer at Proposed Rates		\$ 28,932	\$ 20,441	\$ 7,620	\$ -	\$ 871	\$ -
Total Direct Private Fire at Proposed Rates		\$ 420	\$ -	\$ -	\$ -	\$ -	\$ 420
Total Operating Expenses at Proposed Rates		\$ 223,021	\$ 98,459	\$ 109,331	\$ -	\$ 14,810	\$ 420

**ARIZONA WATER COMPANY**

Test Year Ended December 31, 2010

Allocation of Operating Expenses to Classes of Service - Detail

		SaddleBrooke Ranch					
Line No.		[A]	[B]	[C]	[D]	[E]	[F]
Operating Expenses							
Operations & Maintenance Expense							
Source of Supply Expenses							
1	Commodity	\$ 25	\$ 6	\$ 16	\$ -	\$ 3	\$ -
2	Demand	222	149	69	-	4	-
3	Customer	-	-	-	-	-	-
4	Direct Private Fire	-	-	-	-	-	-
5	Subtotal Source of Supply Expenses	\$ 246	\$ 155	\$ 85	\$ -	\$ 7	\$ -
6	Pumping Expenses						
7	Commodity	95,151	23,732	61,276	-	10,143	-
8	Demand	26,324	17,656	8,161	-	507	-
9	Customer	-	-	-	-	-	-
10	Direct Private Fire	-	-	-	-	-	-
11	Subtotal Pumping Expenses	\$ 121,475	\$ 41,387	\$ 69,437	\$ -	\$ 10,651	\$ -
12	Water Treatment Expenses						
13	Commodity	678	169	436	-	72	-
14	Demand	75	51	23	-	1	-
15	Customer	-	-	-	-	-	-
16	Direct Private Fire	-	-	-	-	-	-
17	Subtotal Water Treatment Expenses	\$ 753	\$ 220	\$ 460	\$ -	\$ 74	\$ -
18	Transmission & Distribution Expenses						
19	Commodity	717	179	462	-	76	-
20	Demand	6,453	4,328	2,001	-	124	-
21	Customer	-	-	-	-	-	-
22	Direct Private Fire	-	-	-	-	-	-
23	Subtotal Trans. & Dist. Expenses	\$ 7,170	\$ 4,507	\$ 2,462	\$ -	\$ 201	\$ -
24	Customer Accounting Expenses						
25	Commodity	-	-	-	-	-	-
26	Demand	-	-	-	-	-	-
27	Customer	8,094	7,219	858	-	18	-
28	Direct Private Fire	-	-	-	-	-	-
29	Subtotal Customer Accounting Exp.	\$ 8,094	\$ 7,219	\$ 858	\$ -	\$ 18	\$ -
30	Sales Expenses						
31	Commodity	-	-	-	-	-	-
32	Demand	-	-	-	-	-	-
33	Customer	-	-	-	-	-	-
34	Direct Private Fire	-	-	-	-	-	-
35	Subtotal Sales Expenses	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
36	Administrative & General Expenses						
37	Commodity	1,954	487	1,258	-	208	-
38	Demand	3,999	2,682	1,240	-	77	-
39	Customer	4,076	3,635	432	-	9	-
40	Direct Private Fire	0	-	-	-	-	0
41	Subtotal A&G Expenses	\$ 10,030	\$ 6,805	\$ 2,930	\$ -	\$ 294	\$ 0
42	Depreciation & Amortization Expenses						
43	Commodity	7,929	1,978	5,106	-	845	-
44	Demand	71,359	47,861	22,123	-	1,376	-
45	Customer	9,767	8,711	1,035	-	22	-
46	Direct Private Fire	374	-	-	-	-	374
47	Subtotal Depreciation & Amortization	\$ 89,429	\$ 58,549	\$ 28,264	\$ -	\$ 2,242	\$ 374
48	Other Taxes						
49	Commodity	378	94	244	-	40	-
50	Demand	142	95	44	-	3	-
51	Customer	47	42	5	-	0	-
52	Direct Private Fire	0	-	-	-	-	0
53	Subtotal Other Taxes	\$ 567	\$ 231	\$ 293	\$ -	\$ 43	\$ 0
54							

**ARIZONA WATER COMPANY**

Test Year Ended December 31, 2010  
Allocation of Operating Expenses to Classes of Service - Summary

Schedule G-4 Rebuttal  
Page 13 of 14  
Witness: Reiker

Winkelman

Line No.		[A] Adjusted Total - Rebuttal	[B]	[C]	[D]	[E]	[F]
1	Operating Expenses at Present Rates						
2	Operations & Maintenance Expense						
3	Commodity	\$ 17,634	\$ 9,130	\$ 8,028	\$ 476	\$ -	\$ -
4	Demand	26,195	15,001	10,318	876	-	-
5	Customer	16,606	14,449	2,049	108	-	-
6	Direct Private Fire	-	-	-	-	-	-
7	Total Operations & Maintenance	\$ 60,435	\$ 38,580	\$ 20,394	\$ 1,460	\$ -	\$ -
8	Depreciation & Amortization Expenses						
9	Commodity	\$ 1,419	\$ 735	\$ 646	\$ 38	\$ -	\$ -
10	Demand	12,771	7,314	5,030	427	-	-
11	Customer	6,106	5,313	753	40	-	-
12	Direct Private Fire	-	-	-	-	-	-
13	Total Depreciation & Amortization	\$ 20,297	\$ 13,362	\$ 6,430	\$ 505	\$ -	\$ -
14	Income Taxes at Present Rates						
15	Commodity	\$ 79	\$ (845)	\$ 868	\$ 56	\$ -	\$ -
16	Demand	161	(1,729)	1,775	115	-	-
17	Customer	94	(1,008)	1,035	67	-	-
18	Direct Private Fire	-	-	-	-	-	-
19	Total Income Taxes at Present Rates	\$ 334	\$ (3,581)	\$ 3,677	\$ 238	\$ -	\$ -
20	Property Taxes						
21	Commodity	\$ 631	\$ 341	\$ 271	\$ 19	\$ -	\$ -
22	Demand	5,675	3,066	2,435	175	-	-
23	Customer	2,604	1,407	1,117	80	-	-
24	Direct Private Fire	-	-	-	-	-	-
25	Total Property Taxes	\$ 8,910	\$ 4,813	\$ 3,823	\$ 274	\$ -	\$ -
26	Other Taxes						
27	Commodity	\$ 391	\$ 202	\$ 178	\$ 11	\$ -	\$ -
28	Demand	580	332	229	19	-	-
29	Customer	368	320	45	2	-	-
30	Direct Private Fire	-	-	-	-	-	-
31	Total Other Taxes	\$ 1,339	\$ 855	\$ 452	\$ 32	\$ -	\$ -
32	Total Commodity at Present Rates	\$ 20,153	\$ 9,562	\$ 9,990	\$ 600	\$ -	\$ -
33	Total Demand at Present Rates	\$ 45,384	\$ 23,984	\$ 19,787	\$ 1,612	\$ -	\$ -
34	Total Customer at Present Rates	\$ 25,778	\$ 20,481	\$ 4,999	\$ 297	\$ -	\$ -
35	Total Direct Private Fire at Present Rates	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
36	Total Operating Expenses at Present Rates	\$ 91,315	\$ 54,028	\$ 34,777	\$ 2,510	\$ -	\$ -
37	Income Taxes at Proposed Rates						
38	Commodity	\$ 2,896	\$ 625	\$ 2,177	\$ 94	\$ -	\$ -
39	Demand	5,923	1,279	4,452	193	-	-
40	Customer	3,452	745	2,595	112	-	-
41	Direct Private Fire	-	-	-	-	-	-
42	Total Income Taxes at Proposed Rates	\$ 12,272	\$ 2,649	\$ 9,224	\$ 399	\$ -	\$ -
43	Property Taxes at Proposed Rates						
44	Commodity	\$ 696	\$ 372	\$ 305	\$ 18	\$ -	\$ -
45	Demand	6,266	3,351	2,749	166	-	-
46	Customer	2,875	1,538	1,261	76	-	-
47	Direct Private Fire	-	-	-	-	-	-
48	Total Property Taxes at Proposed Rates	\$ 9,837	\$ 5,261	\$ 4,315	\$ 261	\$ -	\$ -
49	Total Commodity at Proposed Rates	\$ 23,036	\$ 11,064	\$ 11,334	\$ 837	\$ -	\$ -
50	Total Demand at Proposed Rates	\$ 51,736	\$ 27,277	\$ 22,778	\$ 1,682	\$ -	\$ -
51	Total Customer at Proposed Rates	\$ 29,407	\$ 22,365	\$ 6,704	\$ 338	\$ -	\$ -
52	Total Direct Private Fire at Proposed Rates	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
53	Total Operating Expenses at Proposed Rates	\$ 104,179	\$ 60,707	\$ 40,815	\$ 2,557	\$ -	\$ -
54							
55							

Supporting Schedules:  
G-5 Rebuttal, G-7 Rebuttal

N:\2011\_Rate\_Case\Schedules\Eastern Group\2011 AWC Rate Case Model REBUTTAL SCHEDULES AWC EG 03.30.12 900am.xlsx\G4  
Processing Date: 3/30/2012 11:10 AM

Recap Schedules:  
G-1 Rebuttal, G-2 Rebuttal



**ARIZONA WATER COMPANY**

Test Year Ended December 31, 2010  
Allocation of Operating Expenses to Classes of Service - Detail

Exhibit  
Schedule G-4 Rebuttal  
Page 14 of 14  
Witness: Reiker

		Winkelman					
Line No.		(A)	(B)	(C)	(D)	(E)	(F)
	Operating Expenses	Adjusted Total -					Direct Private Fire
	Operations & Maintenance Expense	Rebuttal					
1	Source of Supply Expenses						
2	Commodity	\$ 38	\$ 20	\$ 17	\$ 1	\$ -	\$ -
3	Demand	345	198	136	12	-	-
4	Customer	-	-	-	-	-	-
5	Direct Private Fire	-	-	-	-	-	-
6	Subtotal Source of Supply Expenses	\$ 383	\$ 217	\$ 153	\$ 13	\$ -	\$ -
7	Pumping Expenses						
8	Commodity	6,550	3,391	2,982	177	-	-
9	Demand	4,373	2,504	1,722	146	-	-
10	Customer	-	-	-	-	-	-
11	Direct Private Fire	-	-	-	-	-	-
12	Subtotal Pumping Expenses	\$ 10,923	\$ 5,896	\$ 4,704	\$ 323	\$ -	\$ -
13	Water Treatment Expenses						
14	Commodity	6,619	3,427	3,013	179	-	-
15	Demand	735	421	290	25	-	-
16	Customer	-	-	-	-	-	-
17	Direct Private Fire	-	-	-	-	-	-
18	Subtotal Water Treatment Expenses	\$ 7,354	\$ 3,848	\$ 3,303	\$ 203	\$ -	\$ -
19	Transmission & Distribution Expenses						
20	Commodity	1,647	853	750	44	-	-
21	Demand	14,826	8,490	5,840	496	-	-
22	Customer	-	-	-	-	-	-
23	Direct Private Fire	-	-	-	-	-	-
24	Subtotal Trans. & Dist. Expenses	\$ 16,473	\$ 9,343	\$ 6,590	\$ 540	\$ -	\$ -
25	Customer Accounting Expenses						
26	Commodity	-	-	-	-	-	-
27	Demand	-	-	-	-	-	-
28	Customer	10,626	9,246	1,311	69	-	-
29	Direct Private Fire	-	-	-	-	-	-
30	Subtotal Customer Accounting Exp.	\$ 10,626	\$ 9,246	\$ 1,311	\$ 69	\$ -	\$ -
31	Sales Expenses						
32	Commodity	-	-	-	-	-	-
33	Demand	-	-	-	-	-	-
34	Customer	-	-	-	-	-	-
35	Direct Private Fire	-	-	-	-	-	-
36	Subtotal Sales Expenses	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
37	Administrative & General Expenses						
38	Commodity	2,779	1,439	1,265	75	-	-
39	Demand	5,916	3,388	2,330	198	-	-
40	Customer	5,979	5,203	738	39	-	-
41	Direct Private Fire	-	-	-	-	-	-
42	Subtotal A&G Expenses	\$ 14,674	\$ 10,029	\$ 4,333	\$ 312	\$ -	\$ -
43	Depreciation & Amortization Expenses						
44	Commodity	1,419	735	646	38	-	-
45	Demand	12,771	7,314	5,030	427	-	-
46	Customer	6,106	5,313	753	40	-	-
47	Direct Private Fire	-	-	-	-	-	-
48	Subtotal Depreciation & Amortization	\$ 20,297	\$ 13,362	\$ 6,430	\$ 505	\$ -	\$ -
49	Other Taxes						
50	Commodity	391	202	178	11	-	-
51	Demand	580	332	229	19	-	-
52	Customer	368	320	45	2	-	-
53	Direct Private Fire	-	-	-	-	-	-
54	Subtotal Other Taxes	\$ 1,339	\$ 855	\$ 452	\$ 32	\$ -	\$ -

Supporting Schedules:  
G-5 Rebuttal, G-7 Rebuttal

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Processing Date: 3/30/2012 11:10 AM

Recap Schedules:  
G-1 Rebuttal, G-2 Rebuttal

Eastern Group									
Line No.	[A] Adjusted Test Year - As Filed	[B] Rebuttal Adjustments	[C] Adjusted Total - Rebuttal	[D] Commodity	[E] Demand	[F] Customer	[G] Direct Private Fire		
1									
2	\$ 62,287	\$ -	\$ 62,287	\$ 6,229	\$ 56,058	\$ -	\$ -	\$ -	
3	12,119,366	1,811	12,121,177	1,212,118	10,909,059	-	-	-	
4	13,875,149	32,829	13,907,978	1,390,798	12,517,180	-	-	-	
5	12,020,942	(82,867)	11,938,075	1,193,807	10,744,267	-	-	-	
6	104,945,645	(127,583)	104,818,062	7,798,415	70,185,737	25,723,631	1,110,279		
7	8,449,073	1,892	8,450,965	668,262	6,014,356	1,695,090	73,258		
8	\$ 151,472,461	\$ (173,918)	\$ 151,298,543	\$ 12,269,629	\$ 110,426,657	\$ 27,418,721	\$ 1,183,536		
9									
10									
11	39,957,566	(8,987)	39,948,579	3,215,965	28,943,688	7,457,512	331,414		
12	\$ 111,514,896	\$ (164,931)	\$ 111,349,964	\$ 9,053,663	\$ 81,482,970	\$ 19,961,209	\$ 852,122		
13									
14									
15	17,126,507	-	17,126,507	1,285,371	11,568,338	4,101,217	171,581		
16	21,160,992	-	21,160,992	1,538,586	13,847,270	5,552,895	222,242		
17	10,111,714	-	10,111,714	813,646	7,322,816	1,891,171	84,081		
18	386,987	-	386,987	31,244	281,194	71,556	2,993		
19	\$ 48,786,200	\$ -	\$ 48,786,200	\$ 3,668,846	\$ 33,019,617	\$ 11,616,838	\$ 480,898		
20									
21									
22	1,514,030	(68,864)	1,445,166	116,144	1,045,297	271,360	12,366		
23	(448,000)	-	(448,000)	(36,276)	(326,485)	(82,007)	(3,233)		
24	\$ 1,066,030	\$ (68,864)	\$ 997,166	\$ 79,868	\$ 718,812	\$ 189,353	\$ 9,133		
25									
26	\$ 63,794,726	\$ (233,795)	\$ 63,560,931	\$ 5,464,685	\$ 49,182,184	\$ 8,533,724	\$ 380,357		
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Line No.	Plant Classification	Superstition (Apache Junction, Superior, Miami)					
		[A]	[B]	[C]	[D]	[E]	[F]
		Adjusted Test Year - As Filed	Rebuttal Adjustments	Adjusted Total - Rebuttal	Commodity	Demand	Customer
1							Direct
2	Intangible Plant	\$ 14,996	\$ -	\$ 14,996	\$ 1,500	\$ 13,496	Private Fire
3	Source of Supply Plant	9,147,660	(7,699)	9,139,961	913,996	8,225,965	-
4	Pumping Plant	10,135,447	32,829	10,168,276	1,016,828	9,151,448	-
5	Water Treatment Plant	10,320,656	(82,867)	10,237,789	1,023,779	9,214,010	-
6	Transmission & Distribution Plant	78,747,178	(34,604)	78,712,575	5,867,023	52,803,210	-
7	General Plant	5,985,412	1,201	5,986,613	482,410	19,282,253	760,089
8	Subtotal Gross Utility Plant	\$ 114,351,350	\$ (91,140)	\$ 114,260,210	\$ 9,305,536	\$ 83,749,821	\$ 1,118,425
9							\$ 804,176
10	Less:						
11	Accumulated Depreciation	27,844,496	(9,197)	27,835,298	2,253,919	20,285,288	5,095,261
12	Net Plant in Service	\$ 86,506,854	\$ (81,942)	\$ 86,424,912	\$ 7,051,617	\$ 63,464,553	\$ 15,305,417
13							\$ 200,851
14	Less:						
15	Advances in Aid of Construction	11,305,977	-	11,305,977	822,506	7,402,558	2,964,072
16	Net Contributions in Aid of Construction	17,604,075	-	17,604,075	1,280,691	11,526,220	4,615,235
17	Deferred Income Tax	7,267,953	-	7,267,953	588,511	5,296,598	1,330,401
18	Customer Deposits	322,847	-	322,847	26,142,02	235,278,17	59,097,26
19	Subtotal Deductions	\$ 36,500,852	\$ -	\$ 36,500,852	\$ 2,717,850	\$ 24,460,654	\$ 8,968,806
20							\$ 353,542
21	Add:						
22	Working Capital	1,016,691	(60,634)	956,056	77,415	696,736	175,006
23	Net Regulatory Asset / (Liability)	(448,000)	-	(448,000)	(36,276)	(326,485)	(82,007)
24	Subtotal Additions	\$ 568,691	\$ (60,634)	\$ 508,056	\$ 41,139	\$ 370,251	\$ 93,000
25							\$ 3,666
26	Total Rate Base	\$ 50,574,693	\$ (142,576)	\$ 50,432,117	\$ 4,374,906	\$ 39,374,150	\$ 6,429,611
27							\$ 253,449
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Cochise (Bisbee, Sierra Vista)									
Line No.	[A]	[B]	[C]	[D]	[E]	[F]	[G]		
	Adjusted Test Year - As Filed	Rebuttal Adjustments	Adjusted Total - Rebuttal	Commodity	Demand	Customer	Direct Private Fire		
1									
2	\$ 44,054	\$ -	\$ 44,054	\$ 4,405	\$ 39,648	\$ -	\$ -		
3	1,649,595	-	1,649,595	164,960	1,484,636	-	-		
4	1,715,876	-	1,715,876	171,588	1,544,288	-	-		
5	143,171	-	143,171	14,317	128,854	-	-		
6	15,999,702	(122,677)	15,877,025	1,119,548	10,075,928	4,346,702	334,847		
7	1,440,538	443	1,440,981	103,600	932,401	376,014	28,966		
8	\$ 20,992,936	\$ (122,234)	\$ 20,870,703	\$ 1,578,417	\$ 14,205,756	\$ 4,722,716	\$ 363,813		
9									
10									
11	7,506,943	39	7,506,982	569,625	5,126,621	1,681,224	129,513		
12	\$ 13,485,994	\$ (122,273)	\$ 13,363,720	\$ 1,008,793	\$ 9,079,135	\$ 3,041,492	\$ 234,301		
13									
14									
15	1,632,190	-	1,632,190	112,587	1,013,281	470,108	36,215		
16	1,759,413	-	1,759,413	121,362	1,092,262	506,751	39,037		
17	1,823,964	-	1,823,964	138,401	1,245,610	408,486	31,468		
18	38,290	-	38,290	2,905,42	26,148,76	8,575,23	660,59		
19	\$ 5,253,857	\$ -	\$ 5,253,857	\$ 375,256	\$ 3,377,302	\$ 1,393,919	\$ 107,380		
20									
21									
22	318,702	(2,875)	315,827	23,965	215,683	70,731	5,449		
23		-	-	-	-	-	-		
24	\$ 318,702	\$ (2,875)	\$ 315,827	\$ 23,965	\$ 215,683	\$ 70,731	\$ 5,449		
25									
26	\$ 8,550,839	\$ (125,148)	\$ 8,425,690	\$ 657,502	\$ 5,917,516	\$ 1,718,303	\$ 132,369		
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San Manuel							
	[A]	[B]	[C]	[D]	[E]	[F]	[G]
	Adjusted Test Year - As Filed	Rebuttal Adjustments	Adjusted Total - Rebuttal	Commodity	Demand	Customer	Direct Private Fire
Plant Classification							
1	\$	484 \$	- \$	484 \$	48 \$	436 \$	-
2		178,993	-	178,993	17,899	161,094	-
3		406,758	-	406,758	40,676	366,082	-
4		1,423,285	-	1,423,285	142,329	1,280,957	-
5		1,915,019	-	1,915,019	137,744	1,239,692	-
6		489,994	101	490,095	35,995	537,483	100
7						130,121	24
8	\$	4,414,534 \$	101 \$	4,414,635 \$	374,691 \$	3,372,215 \$	124
9							
10	Less:						
11	1,313,974	9	1,313,983	111,928	1,007,352	194,667	36
12	\$	3,100,560 \$	92 \$	3,100,652 \$	262,763 \$	2,364,863 \$	88
13							
14	Less:						
15	61,297	-	61,297	4,244	38,192	18,858	4
16	690,109	-	690,109	47,776	429,987	212,306	40
17	416,036	-	416,036	35,439	318,950	61,636	11
18	11,769	-	11,769	1,002.53	9,022.80	1,743.62	0.32
19	\$	1,179,212 \$	- \$	1,179,212 \$	88,461 \$	796,152 \$	55
20							
21	Add:						
22	95,402	(2,091)	93,311	7,948	71,536	13,824	3
23							
24	\$	95,402 \$	(2,091) \$	93,311 \$	7,948 \$	71,536 \$	-
25							
26	\$	2,016,750 \$	(1,998) \$	2,014,751 \$	182,250 \$	1,640,247 \$	36
27							

		Oracle						
		[A]	[B]	[C]	[D]	[E]	[F]	[G]
Line No.	Plant Classification	Adjusted Test Year - As Filed	Rebuttal Adjustments	Adjusted Total - Rebuttal	Commodity	Demand	Customer	Direct Private Fire
1								
2	Intangible Plant	\$ 605	\$ -	\$ 605	\$ 60	\$ 544	\$ -	\$ -
3	Source of Supply Plant	634,099	-	634,099	63,410	570,689	-	-
4	Pumping Plant	982,778	-	982,778	98,278	884,501	-	-
5	Water Treatment Plant	106,633	-	106,633	10,663	95,970	-	-
6	Transmission & Distribution Plant	5,243,850	29,697	5,273,548	427,842	3,850,581	995,124	-
7	General Plant	468,044	126	468,170	41,941	377,473	48,755	-
8	Subtotal Gross Utility Plant	\$ 7,436,010	\$ 29,823	\$ 7,465,833	\$ 642,195	\$ 5,779,758	\$ 1,043,879	\$ -
9								
10	Less:							
11	Accumulated Depreciation	2,829,383	11	2,829,394	243,579	2,192,213	393,602	-
12	Net Plant in Service	\$ 4,606,627	\$ 29,812	\$ 4,636,439	\$ 398,616	\$ 3,587,545	\$ 650,277	\$ -
13								
14	Less:							
15	Advances in Aid of Construction	814,160	-	814,160	64,996	584,968	164,196	-
16	Net Contributions in Aid of Construction	865,984	-	865,984	69,134	622,203	174,647	-
17	Deferred Income Tax	517,509	-	517,509	44,552	400,965	71,992	-
18	Customer Deposits	12,126	-	12,126	1,043.93	9,395.34	1,686.89	-
19	Subtotal Deductions	\$ 2,209,779	\$ -	\$ 2,209,779	\$ 179,726	\$ 1,617,532	\$ 412,521	\$ -
20								
21	Add:							
22	Working Capital	73,335	(1,999)	71,337	6,141	55,272	9,924	-
23	Net Regulatory Asset / (Liability)	-	-	-	-	-	-	-
24	Subtotal Additions	\$ 73,335	\$ (1,999)	\$ 71,337	\$ 6,141	\$ 55,272	\$ 9,924	\$ -
25								
26	Total Rate Base	\$ 2,470,183	\$ 27,813	\$ 2,497,996	\$ 225,032	\$ 2,025,285	\$ 247,680	\$ -
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SaddleBrooke Ranch									
Line No.	[A] Adjusted Test Year - As Filed	[B] Rebuttal Adjustments	[C] Adjusted Total - Rebuttal	[D] Commodity	[E] Demand	[F] Customer	[G] Direct Private Fire		
1									
2		14 \$	\$	14 \$	1 \$	12 \$			
3		457,358	9,510	466,868	420,181	-			
4		470,357	-	470,357	423,322	-			
5		3	-	3	0	-			
6		2,726,285	-	2,726,285	2,081,480	398,287			15,243
7		32,198	9	32,207	24,590	4,705			180
8									
9		\$ 3,686,215	\$ 9,519	\$ 3,695,734	\$ 2,949,587	\$ 402,992			\$ 15,423
10									
11		242,563	150	242,712	193,670	26,509			1,014
12		\$ 3,443,653	\$ 9,370	\$ 3,453,022	\$ 2,755,917	\$ 376,484			\$ 14,408
13									
14									
15		3,312,883	-	3,312,883	2,529,339	483,984			18,522
16		221,170	-	221,170	168,860	32,311			1,237
17		38,052	-	38,052	30,363	4,156			159
18		706	-	706	563,19	77,09			2,95
19									
20		\$ 3,572,811	\$ -	\$ 3,572,811	\$ 2,729,126	\$ 520,528			\$ 19,921
21									
22		4,557	(783)	3,775	3,012	412			16
23									
24									
25		\$ 4,557	\$ (783)	\$ 3,775	\$ 3,012	\$ 412			\$ 16
26									
27		\$ (124,601)	\$ 8,587	\$ (116,014)	\$ 29,804	\$ (143,632)			\$ (5,497)
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		Winkelman					
		[A]	[B]	[C]	[D]	[E]	[F] [G]
Line No.	Plant Classification	Adjusted Test Year - As Filed	Rebuttal Adjustments	Adjusted Total - Rebuttal	Commodity	Demand	Customer Private Fire
1							
2	Intangible Plant	\$ 2,134	\$ -	\$ 2,134	213	\$ 1,921	\$ -
3	Source of Supply Plant	51,660	-	51,660	5,166	46,494	-
4	Pumping Plant	163,932	-	163,932	16,393	147,539	-
5	Water Treatment Plant	27,193	-	27,193	2,719	24,474	-
6	Transmission & Distribution Plant	313,610	-	313,610	14,983	134,846	-
7	General Plant	32,887	12	32,899	1,583	14,247	-
8	Subtotal Gross Utility Plant	\$ 591,416	\$ 12	\$ 591,428	\$ 41,058	\$ 369,520	\$ 180,850
9							
10	Less:						
11	Accumulated Depreciation	220,207	1	220,208	15,396	138,563	66,249
12	Net Plant in Service	\$ 371,209	\$ 11	\$ 371,219	\$ 25,662	\$ 230,956	\$ 114,601
13							
14	Less:						
15	Advances in Aid of Construction	-	-	-	-	-	-
16	Net Contributions in Aid of Construction	20,241	-	20,241	860	7,737	11,644
17	Deferred Income Tax	48,199	-	48,199	3,370	30,329	14,501
18	Customer Deposits	1,249	-	1,249	87,31	785,77	375,69
19	Subtotal Deductions	\$ 69,689	\$ -	\$ 69,689	\$ 4,317	\$ 38,852	\$ 26,520
20							
21	Add:						
22	Working Capital	5,343	(483)	4,860	340	3,058	1,462
23	Net Regulatory Asset / (Liability)	-	-	-	-	-	-
24	Subtotal Additions	\$ 5,343	\$ (483)	\$ 4,860	\$ 340	\$ 3,058	\$ 1,462
25							
26	Total Rate Base	\$ 306,862	\$ (472)	\$ 306,390	\$ 21,685	\$ 195,162	\$ 89,543
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Line No.	Description	Eastern Group					Direct Private Fire
		[A] Adjusted Test Year - As Filed	[B] Rebuttal Adjustments	[C] Adjusted Total - Rebuttal	[D] Commodity	[E] Demand	
1	Operating Expenses						
2	Operations & Maintenance Expenses:						
3	Source of Supply Expenses:						
4	Purchased Water	\$ 1,064,433	\$ (82,364)	\$ 982,069	\$ 883,862	\$ 98,207	\$ -
5	Other	118,809	(986)	117,823	11,782	106,041	-
6		\$ 1,183,242	\$ (83,350)	\$ 1,099,892	\$ 895,644	\$ 204,248	\$ -
7	Subtotal Source of Supply Expenses						
8	Pumping Expenses:						
9	Purchased Power	2,124,865	3,537	2,128,402	1,915,562	212,840	-
10	Purchased Gas	1,606	-	1,606	1,445	161	-
11	Other	767,380	(7,573)	759,807	75,981	683,827	-
12		\$ 2,893,851	\$ (4,036)	\$ 2,889,815	\$ 1,992,988	\$ 896,827	\$ -
13	Subtotal Pumping Expenses						
14	Water Treatment Expenses	752,812	(10,732)	742,080	667,872	74,208	-
15	Transmission & Distribution Expenses	2,561,932	(22,578)	2,539,354	253,935	2,285,419	-
16	Customer Accounting Expenses	1,768,860	(18,616)	1,750,244	-	1,750,244	-
17	Sales Expense	-	-	-	-	-	-
18	Administrative & General Expenses	2,969,905	(27,284)	2,942,621	560,468	1,183,902	177
19	Operations & Maintenance Expense	12,130,602	(166,596)	11,964,006	4,370,908	4,644,604	177
20							
21	Depreciation & Amortization Expenses	3,570,899	(3,265)	3,567,635	288,201	2,593,808	28,214
22							
23	Taxes						
24	Income Taxes at Present Rates	554,482	25,358	579,840	154,794	273,717	10,123
25	Property Taxes	986,631	108,105	1,094,736	93,553	841,977	3,779
26	Other	257,300	-	257,300	92,169	100,847	4
27	Total Taxes	\$ 1,798,413	\$ 133,463	\$ 1,931,876	\$ 340,517	\$ 1,216,541	\$ 13,906
28							
29	Total Operating Expenses	\$ 17,499,915	\$ (36,397)	\$ 17,463,517	\$ 4,999,626	\$ 8,454,954	\$ 42,298
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38	Income Taxes at Proposed Rates						
39		\$ 2,550,507	\$ -	\$ 2,550,507	\$ 754,364	\$ 1,188,236	\$ 13,003
40	Property Taxes at Proposed Rates						
41		1,187,906	-	1,187,906	101,406	912,655	3,584
42	Total Operating Expenses at Proposed Rates	\$ 19,527,353	\$ -	\$ 19,527,353	\$ 5,607,049	\$ 9,440,151	\$ 44,983
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Income & Property Taxes at Proposed Rates							Direct Private Fire
	Adjusted with Increase	Commodity	Demand	Customer			
	\$ 2,550,507	\$ 754,364	\$ 1,188,236	\$ 594,903	\$ 13,003		
	1,187,906	101,406	912,655	170,261	3,584		
	\$ 19,527,353	\$ 5,607,049	\$ 9,440,151	\$ 4,435,171	\$ 44,983		

		Superstition (Apache Junction, Superior, Miami)						
		[A]	[B]	[C]	[D]	[E]	[F]	[G]
Line	No.	Adjusted Test Year - As Filed	Rebuttal Adjustments	Adjusted Total - Rebuttal	Commodity	Demand	Customer	Direct Private Fire
1	Operating Expenses							
2	Operations & Maintenance Expenses							
3	Source of Supply Expenses:							
4	Purchased Water	\$ 691,466	\$ -	\$ 691,466	\$ 622,319	\$ 69,147	\$ -	\$ -
5	Other	73,495	(454)	73,041	7,304	65,737	-	-
6	Subtotal Source of Supply Expenses	\$ 764,961	\$ (454)	\$ 764,507	\$ 629,624	\$ 134,884	\$ -	\$ -
7								
8	Pumping Expenses:							
9	Purchased Power	1,424,839	208	1,425,047	1,282,543	142,505	-	-
10	Purchased Gas	-	-	-	-	-	-	-
11	Other	553,472	(5,867)	547,605	54,760	492,844	-	-
12	Subtotal Pumping Expenses	\$ 1,978,311	\$ (5,659)	\$ 1,972,652	\$ 1,337,303	\$ 635,349	\$ -	\$ -
13								
14	Water Treatment Expenses	597,301	(569)	596,732	537,059	59,673	-	-
15	Transmission & Distribution Expenses	1,742,369	(14,469)	1,727,900	1,727,900	1,555,110	-	-
16	Customer Accounting Expenses	1,182,195	(13,469)	1,168,726	-	-	1,168,726	-
17	Sales Expense	-	-	-	-	-	-	-
18	Administrative & General Expenses	2,090,357	(21,649)	2,068,708	394,878	831,508	842,213	110
19	Total Operations & Maintenance Expense	\$ 8,355,495	\$ (56,269)	\$ 8,299,226	\$ 3,071,653	\$ 3,216,524	\$ 2,010,938	\$ 110
20								
21	Depreciation & Amortization Expenses	2,672,715	(1,019)	2,671,695	216,336	1,947,026	489,055	19,278
22								
23	Taxes							
24	Income Taxes at Present Rates	547,316	(14,793)	532,523	157,228	246,916	119,547	8,831
25	Property Taxes	747,264	100,384	847,648	73,640	662,756	108,225	3,028
26	Other	170,486	-	170,486	63,099	66,075	41,309	2
27	Total Taxes	\$ 1,465,065	\$ 85,591	\$ 1,550,656	\$ 293,967	\$ 975,746	\$ 269,081	\$ 11,862
28								
29	Total Operating Expenses	\$ 12,493,275	\$ 28,303	\$ 12,521,578	\$ 3,581,957	\$ 6,139,296	\$ 2,769,075	\$ 31,250
30								
31								
32								
33								
34								
35								
36								
37								
38	Income Taxes at Proposed Rates			\$ 2,020,001	\$ 603,388	\$ 947,578	\$ 458,781	\$ 10,254
39								
40	Property Taxes at Proposed Rates			921,351	80,087	720,786	117,701	2,777
41								
42	Total Operating Expenses at Proposed Rates			\$ 14,082,758	\$ 4,034,564	\$ 6,897,988	\$ 3,117,784	\$ 32,421
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		Income & Property Taxes at Proposed Rates						
		Adjusted with Increase	Commodity	Demand	Customer	Direct Private Fire		
38	Income Taxes at Proposed Rates	\$ 2,020,001	\$ 603,388	\$ 947,578	\$ 458,781	\$ 10,254		
39								
40	Property Taxes at Proposed Rates	921,351	80,087	720,786	117,701	2,777		
41								
42	Total Operating Expenses at Proposed Rates	\$ 14,082,758	\$ 4,034,564	\$ 6,897,988	\$ 3,117,784	\$ 32,421		
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Cochise (Bisbee, Sierra Vista)						
[A]	[B]	[C]	[D]	[E]	[F]	[G]
Adjusted Test Year - As Filed	Rebuttal Adjustments	Adjusted Total - Rebuttal	Commodity	Demand	Customer	Direct Private Fire
Operating Expenses						
1 Operations & Maintenance Expenses						
2 Source of Supply Expenses:						
3 Purchased Water						
4 Other	\$ -	\$ (429)	\$ -	\$ -	\$ -	\$ -
5 Subtotal Source of Supply Expenses	\$ 36,839	\$ 36,410	\$ 3,641	\$ 32,769	\$ -	\$ -
6	\$ -	\$ 36,410	\$ 3,641	\$ 32,769	\$ -	\$ -
7						
Pumping Expenses:						
8 Purchased Power	448,281	3,104	451,385	45,138	-	-
9 Purchased Gas	1,606	-	1,606	145	-	-
10 Other	103,494	(1,635)	101,859	10,186	91,673	-
11 Subtotal Pumping Expenses	\$ 553,381	\$ 1,469	\$ 554,850	\$ 417,878	\$ 136,973	\$ -
12						
13						
Water Treatment Expenses	75,164	(501)	74,663	7,466	-	-
14 Transmission & Distribution Expenses	564,445	(5,256)	559,189	55,919	-	-
15 Customer Accounting Expenses	355,671	(2,950)	352,721	-	352,721	-
16 Sales Expense	-	-	-	-	-	-
17 Administrative & General Expenses	573,227	(3,533)	569,694	107,764	229,781	66
18 Total Operations & Maintenance Expense	\$ 2,158,727	\$ (11,200)	\$ 2,147,527	\$ 652,398	\$ 910,259	\$ 584,804
19						
20 Depreciation & Amortization Expenses	498,716	(2,613)	496,103	338,795	111,105	8,559
21						
22 Taxes						
23 Income Taxes at Present Rates	63,470	5,760	69,230	17,817	32,251	17,969
24 Property Taxes	137,972	3,079	141,051	11,126	100,130	29,075
25 Other	57,585	-	57,585	17,494	24,408	15,681
26 Total Taxes	\$ 259,027	\$ 8,839	\$ 267,865	\$ 46,436	\$ 156,789	\$ 62,725
27						
28						
29 Total Operating Expenses	\$ 2,916,470	\$ (4,975)	\$ 2,911,495	\$ 736,478	\$ 1,405,843	\$ 758,633
30						
31						
32						
33						
34						
35						
36						
37 Income Taxes at Proposed Rates	\$ -	\$ 337,481	\$ 87,729	\$ 158,799	\$ 88,475	\$ 2,478
38						
39 Property Taxes at Proposed Rates		151,085	11,918	107,259	31,145	763
40						
41 Total Operating Expenses at Proposed Rates	\$ -	\$ 3,189,781	\$ 807,182	\$ 1,539,520	\$ 831,210	\$ 11,968
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Income & Property Taxes at Proposed Rates					
Adjusted with Increase		Commodity	Demand	Customer	Direct Private Fire
\$	337,481	\$ 87,729	\$ 158,799	\$ 88,475	\$ 2,478
	151,085	11,918	107,259	31,145	763
\$	3,189,781	\$ 807,182	\$ 1,539,520	\$ 831,210	\$ 11,968

	Income & Property Taxes at Proposed Rates				
	Adjusted with Increase	Commodity	Demand	Customer	Direct Private Fire
Income Taxes at Proposed Rates	\$ 110,476	\$ 48,206	\$ 39,703	\$ 22,447	\$ 121
Property Taxes at Proposed Rates	53,990	4,883	43,944	5,150	14
Total Operating Expenses at Proposed Rates	\$ 1,057,557	\$ 443,969	\$ 404,075	\$ 209,376	\$ 137

Line No.		Oracle					[G]
		[A]	[B]	[C]	[D]	[E]	
		Adjusted Test Year - As Filed	Rebuttal Adjustments	Adjusted Total - Rebuttal	Commodity	Demand	Customer
1	Operating Expenses						Direct Private Fire
2	Operations & Maintenance Expenses						
3	Source of Supply Expenses:						
4	Purchased Water						
5	Other	5,203	-	5,153	515	4,637	-
6	Subtotal Source of Supply Expenses	5,203	(50)	5,153	515	4,637	-
7							
8	Pumping Expenses:						
9	Purchased Power	107,154	102	107,256	96,530	10,726	-
10	Purchased Gas	-	-	-	-	-	-
11	Other	39,396	(88)	39,308	3,931	35,377	-
12	Subtotal Pumping Expenses	146,550	14	146,564	100,461	46,102	-
13							
14	Water Treatment Expenses	17,008	(68)	16,940	15,246	1,694	-
15	Transmission & Distribution Expenses	127,733	(1,374)	126,359	12,636	113,723	-
16	Customer Accounting Expenses	103,050	(650)	102,400	-	-	102,400
17	Sales Expense	-	-	-	-	-	-
18	Administrative & General Expenses	147,197	(1,061)	146,136	27,735	58,950	59,450
19	Total Operations & Maintenance Expense	546,739	(3,189)	543,550	156,594	225,107	161,850
20							
21	Depreciation & Amortization Expenses	176,809	346	177,155	15,251	137,260	24,644
22							
23	Taxes						
24	Income Taxes at Present Rates	50,728	(440)	50,288	11,965	25,231	12,985
25	Property Taxes	39,795	3,053	42,848	3,859	34,730	4,247
26	Other	12,688	-	12,688	3,655	5,255	3,778
27	Total Taxes	103,211	2,613	105,824	19,479	65,215	21,011
28							118
29	Total Operating Expenses	826,760	(230)	826,530	191,324	427,582	207,505
30							118
31							
32							
33							
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36							
37							
38	Income Taxes at Proposed Rates						
39							
40	Property Taxes at Proposed Rates						
41							
42	Total Operating Expenses at Proposed Rates						
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Income & Property Taxes at Proposed Rates					Direct Private Fire
Adjusted with Increase	Commodity	Demand	Customer		
\$ 91,929	\$ 21,890	\$ 46,160	\$ 23,756	\$	122
44,735	4,029	36,259	4,434		13
\$ 870,058	\$ 201,419	\$ 450,040	\$ 218,463	\$	136

**ARIZONA WATER COMPANY**

Test Year Ended December 31, 2010

Distribution of Expenses by Function

SaddleBrooke Ranch							
	[A]	[B]	[C]	[D]	[E]	[F]	[G]
Line No.	Adjusted Test Year - As Filed	Rebuttal Adjustments	Adjusted Total - Rebuttal	Commodity	Demand	Customer	Direct Private Fire
1	Operating Expenses						
2	Operations & Maintenance Expenses						
3	Source of Supply Expenses:						
4	Purchased Water	-	-	-	-	-	-
5	Other	246	-	246	25	222	-
6	Subtotal Source of Supply Expenses	246	-	246	25	222	-
7							
8	Pumping Expenses:						
9	Purchased Power	103,754	-	103,754	93,379	10,375	-
10	Purchased Gas	-	-	-	-	-	-
11	Other	17,703	18	17,721	1,772	15,949	-
12	Subtotal Pumping Expenses	121,457	18	121,475	95,151	26,324	-
13							
14	Water Treatment Expenses						
15	Transmission & Distribution Expenses	753	-	753	678	75	-
16	Customer Accounting Expenses	7,190	(20)	7,170	717	6,453	-
17	Sales Expense	8,102	(8)	8,094	-	8,094	-
18	Administrative & General Expenses	-	-	-	-	-	-
19	Total Operations & Maintenance Expense	10,107	(77)	10,030	1,954	3,999	0
20		147,856	(87)	147,769	98,524	37,074	0
21	Depreciation & Amortization Expenses	89,428	2	89,429	7,929	71,359	374
22							
23	Taxes						
24	Income Taxes at Present Rates	(47,034)	(1,496)	(48,530)	(21,764)	(22,169)	(113)
25	Property Taxes	5,275	(207)	5,068	(152)	(1,366)	4
26	Other	567	-	567	378	142	0
27	Total Taxes	(41,192)	(1,704)	(42,895)	(21,537)	(23,392)	(109)
28							
29	Total Operating Expenses	196,091	(1,789)	194,302	84,915	85,041	265

Income & Property Taxes at Proposed Rates						
	Adjusted with Increase	Commodity	Demand	Customer	Direct Private Fire	
Income Taxes at Proposed Rates	\$ (21,652)	\$ (9,746)	\$ (9,927)	\$ (2,008)	\$ 29	
Property Taxes at Proposed Rates	6,908	(206)	(1,858)	8,956	17	
Total Operating Expenses at Proposed Rates	\$ 223,021	\$ 96,879	\$ 96,790	\$ 28,932	\$ 420	

Supporting Schedules:

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Recap Schedules:  
G-4 Rebuttal

Winkelman									
Line No.	[A] Adjusted Test Year - As Filed	[B] Rebuttal Adjustments	[C] Adjusted Total - Rebuttal	[D] Commodity	[E] Demand	[F] Customer	[G] Direct Private Fire		
1									
2	Operating Expenses								
3	Operations & Maintenance Expenses								
4	Source of Supply Expenses:								
5	Purchased Water	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6	Other	388	(5)	383	38	345	-	-	-
7	Subtotal Source of Supply Expenses	\$ 388	\$ (5)	\$ 383	\$ 38	\$ 345	\$ -	\$ -	\$ -
8	Pumping Expenses:								
9	Purchased Power	6,781	41	6,822	6,140	682	-	-	-
10	Purchased Gas	-	-	-	-	-	-	-	-
11	Other	4,108	(7)	4,101	410	3,691	-	-	-
12	Subtotal Pumping Expenses	\$ 10,889	\$ 34	\$ 10,923	\$ 6,550	\$ 4,373	\$ -	\$ -	\$ -
13	Water Treatment Expenses								
14	Transmission & Distribution Expenses	7,361	(7)	7,354	6,619	735	-	-	-
15	Customer Accounting Expenses	16,617	(144)	16,473	1,647	14,826	-	-	-
16	Sales Expense	10,673	(47)	10,626	-	10,626	-	-	-
17	Administrative & General Expenses	-	-	-	-	-	-	-	-
18	Operations & Maintenance Expense	14,757	(83)	14,674	2,779	5,916	5,979	-	-
19	Total Operations & Maintenance Expense	\$ 60,687	\$ (252)	\$ 60,435	\$ 17,634	\$ 26,195	\$ 16,606	\$ -	\$ -
20	Depreciation & Amortization Expenses	20,295	2	20,297	1,419	12,771	6,106	-	-
21	Taxes								
22	Income Taxes at Present Rates	543	(208)	334	79	161	94	-	-
23	Property Taxes	8,104	806	8,910	631	5,675	2,604	-	-
24	Other	1,339	-	1,339	391	580	368	-	-
25	Total Taxes	\$ 9,986	\$ 597	\$ 10,583	\$ 1,100	\$ 6,417	\$ 3,066	\$ -	\$ -
26	Total Operating Expenses	\$ 90,967	\$ 347	\$ 91,315	\$ 20,153	\$ 45,384	\$ 25,778	\$ -	\$ -
27									
28									
29									
30									
31									
32									
33									
34									
35									
36									
37									
38	Income Taxes at Proposed Rates		\$	12,272	\$ 2,896	\$ 5,923	\$ 3,452	\$ -	\$ -
39	Property Taxes at Proposed Rates			9,837	696	6,266	2,875	-	-
40	Total Operating Expenses at Proposed Rates		\$	104,179	\$ 23,036	\$ 51,736	\$ 29,407	\$ -	\$ -
41									
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Income & Property Taxes at Proposed Rates									
	Adjusted with Increase	Commodity	Demand	Customer	Direct Private Fire				
	\$	12,272	\$	2,896	\$	5,923	\$	3,452	\$
		9,837		696		6,266		2,875	
	\$	104,179	\$	23,036	\$	51,736	\$	29,407	\$

Line No.	[A]	[B]	[C]	[D]	[E]
	End of Test Year <sup>1</sup> 12/31/2010	Commodity	Demand	Customer	Direct Private Fire
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<sup>1</sup>Excludes Phoenix office & meter shop

Supporting Schedules:

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Superstition (Apache Junction, Superior, Miami)						
	[A]	[B]	[C]	[D]	[E]	
Line No.	End of Test Year 12/31/2010	Commodity	Demand	Customer	Direct Private Fire	
1	Operating Expenses <sup>1</sup>					
2	Source of Supply Expenses:					
3	Purchased Water	\$ 691,466	0.90	0.10	-	
4	Other	68,687	0.10	0.90	-	
5	Pumping Expenses:					
6	Purchased Power	1,402,065	0.90	0.10	-	
7	Purchased Gas		0.90	0.10	-	
8	Other		0.10	0.90	-	
9	Water Treatment Expenses	511,114	0.90	0.10	-	
10	Transmission & Distribution Expenses	563,641	0.90	0.10	-	
11	Customer Accounting Expenses	1,293,729	0.10	0.90	-	
12	Sales Expense	1,127,386	-	-	1.00	
13	Administrative & General Expenses	-	-	-	1.00	
14	Total Operations & Maintenance Expense	1,828,249	0.19	0.40	0.41	
15		\$ 7,486,337	0.39	0.36	0.25	
16	Depreciation & Amortization Expenses	\$ 2,485,880	0.08	0.73	0.18	
17					0.01	

<sup>1</sup>A&G Expense allocation ratios updated to reflect 2010 actual functional ratios. All other allocation ratios reflect those accepted in Docket No. 08-0440.

**ARIZONA WATER COMPANY**

Test Year Ended December 31, 2010  
Development of Allocation Factors/Units of Service

Exhibit  
Schedule G-7 Rebuttal  
Page 3 of 18  
Witness: Reiker

Line No.	Supersition (Apache Junction, Superior, Miami)									
	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]
1	<u>Commodity Allocation Factor</u>									
2		Total	Percent							
3		M Gallons	of Total /							
4			Factor							
5	Class									
6	Residential	2,075,778	78.35%							
7	Commercial	524,137	19.78%							
8	Industrial	19,641	0.74%							
9	Other	29,768	1.12%							
10										
11	Totals	2,649,324	100.00%							
12										
13										
14										
15	<u>Demand Allocation Factor</u>									
16										
17	Class									
18	Residential									
19	Meters/Services	21,020	1,553	57	4	10	13			
20	Equivalent Weight	1.0	2.5	8.0	16.0	25.0	50.0			
21	Equivalent Meters/Services	21,020	3,883	455	64	259	667	80.0	115.0	
22	Commercial									26,348
23	Meters/Services	384	294	221	25	11	12	2		
24	Equivalent Weight	1.0	2.5	8.0	16.0	25.0	50.0	80.0	115.0	
25	Equivalent Meters/Services	384	735	1,769	402	276	589	162		4,316
26	Industrial									
27	Meters/Services	-	3	4	2	-	-	-		
28	Equivalent Weight	1.0	2.5	8.0	16.0	25.0	50.0	80.0	115.0	
29	Equivalent Meters/Services	-	8	32	32	-	-	-		72
30	Other									
31	Meters/Services	-	-	-	20	1	0	-		
32	Equivalent Weight	1.0	2.5	8.0	16.0	25.0	50.0	80.0	115.0	
33	Equivalent Meters/Services	-	-	-	316	25	13	-		354
34										
35	Totals									31,088
36										100.00%
37										
38										
39										
40										
41	<u>Customer Allocation Factor</u>									
42		Meters /	Bills	Percent						
43		Services		of Total /						
44				Factor						
45	Class									
46	Residential	22,658	271,896	95.86%						
47	Commercial	949	11,388	4.01%						
48	Industrial	9	108	0.04%						
49	Other	21	252	0.09%						
50										
51	Totals	23,637	283,644	100.00%						
52										
53										
54										
55										

\*Allocation factors include customer growth

Supporting Schedules:

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Recap Schedules:  
G-4 Rebuttal, G-3 Rebuttal

Cochise (Bisbee, Sierra Vista)						
	[A]	[B]	[C]	[D]	[E]	
Line No.	End of Test Year <sup>1</sup> 12/31/2010					
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Supporting Schedules:

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Processing Date: 3/30/2012 11:10 AM

Cochise (Bisbee, Sierra Vista)							
Line No.	[A] End of Test Year 12/31/2010	[B]		[C]		[D]	[E]
		Commodity	Demand	Customer	Direct Private Fire		
1	Operating Expenses <sup>1</sup>						
2	Source of Supply Expenses:						
3	Purchased Water		0.90	0.10	-	-	-
4	Other	32,134	0.10	0.90	-	-	-
5	Pumping Expenses:						
6	Purchased Power	445,426	0.90	0.10	-	-	-
7	Purchased Gas	1,606	0.90	0.10	-	-	-
8	Other	86,363	0.10	0.90	-	-	-
9	Water Treatment Expenses	87,444	0.90	0.10	-	-	-
10	Transmission & Distribution Expenses	401,330	0.90	0.10	-	-	-
11	Customer Accounting Expenses	323,274	-	-	1.00	-	-
12	Sales Expense		-	-	1.00	-	-
13	Administrative & General Expenses	502,102	0.19	0.40	0.41	0.00	0.00
14	Total Operations & Maintenance Expense	1,879,679	0.33	0.39	0.28	0.00	0.00
15							
16	Depreciation & Amortization Expenses	464,098	0.08	0.68	0.22	0.02	0.02

<sup>1</sup>A&G Expense allocation ratios updated to reflect 2010 actual functional ratios. All other allocation ratios reflect those accepted in Docket No. 08-0440.

**ARIZONA WATER COMPANY**

Test Year Ended December 31, 2010  
Development of Allocation Factors/Units of Service

Line No.	Commodity Allocation Factor	Cochise (Bisbee, Sierra Vista)									
		[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]
		Total	Percent of Total /								
		M Gallons	Factor								
5	Class										
6	Residential	470,603	70.41%								
7	Commercial	179,335	26.83%								
8	Industrial	39	0.01%								
9	Other	18,429	2.76%								
10											
11	Totals	668,406	100.00%								
12											
13											
14											
15											
16											
17	Demand Allocation Factor										
18	Class										
19	Residential										
20	Meters/Services	5,790	91								
21	Equivalent Weight	1.0	2.5								
22	Equivalent Meters/Services	5,790	227								
23	Commercial										
24	Meters/Services	282	89								
25	Equivalent Weight	1.0	2.5								
26	Equivalent Meters/Services	282	221								
27	Industrial										
28	Meters/Services	-	1								
29	Equivalent Weight	1.0	2.5								
30	Equivalent Meters/Services	-	3								
31	Other										
32	Meters/Services	-	-								
33	Equivalent Weight	1.0	2.5								
34	Equivalent Meters/Services	-	-								
35											
36	Totals										
37											
38											
39											
40											
41	Customer Allocation Factor										
42											
43											
44	Class										
45	Residential	5,888	70,656								
46	Commercial	469	5,628								
47	Industrial	2	24								
48	Other	6	68								
49											
50	Totals	6,365	76,376								
51											
52											
53											
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\*Allocation factors include customer growth

Supporting Schedules:

N:\2011\_Rate\_Case\Schedules\Eastern Group\2011 AWC Rate Case Model\REBUTTAL SCHEDULES AWC EG 03.30.12 900am.xlsx\G7  
Processing Date: 3/30/2012 11:10 AM

		San Manuel			
		[A]	[B]	[C]	[D] [E]
Line No.		End of Test Year <sup>1</sup> 12/31/2010	Commodity	Demand	Customer Direct Private Fire
1	Intangible Plant				
2	Organization	\$ -	0.10	0.90	-
3	Franchises	-	0.10	0.90	-
4	Other Intangibles	334	0.10	0.90	-
5	Subtotal Intangible Plant	\$ 334	0.10	0.90	-
6	Source of Supply Plant				
7	Water Rights	173,432	0.10	0.90	-
8	Other Source of Supply Land	-	0.10	0.90	-
9	Wells - Other	-	0.10	0.90	-
10	Wells	5,560	0.10	0.90	-
11	Subtotal Source of Supply Plant	\$ 178,992	0.10	0.90	-
12	Pumping Plant				
13	Pumping Plant Land	7,000	0.10	0.90	-
14	Pumping Plant Structures & Improvements	14,110	0.10	0.90	-
15	Electric Pumping Equipment	385,648	0.10	0.90	-
16	Gas Engine Equipment	-	0.10	0.90	-
17	Subtotal Pumping Plant	\$ 406,758	0.10	0.90	-
18	Water Treatment Plant				
19	Water Treatment Plant Land	2,000	0.10	0.90	-
20	Water Treatment Structures & Improvements	42,932	0.10	0.90	-
21	Water Treatment Equipment	1,378,319	0.10	0.90	-
22	Subtotal Water Treatment Plant	\$ 1,423,251	0.10	0.90	-
23	Transmission & Distribution Plant				
24	Transmission and Distribution Land	69,500	0.10	0.90	-
25	Storage Tanks	98,403	0.10	0.90	-
26	Transmission & Distribution Mains	1,209,461	0.10	0.90	-
27	Fire Sprinkler Taps	100	-	-	1.00
28	Services	339,836	-	-	1.00
29	Meters	122,815	-	-	1.00
30	Hydrants	74,805	-	-	1.00
31	Subtotal Transmission & Distribution Plant	\$ 1,914,920	0.07	0.65	0.28 0.00
32	General Plant				
33	General Plant Land	-	0.10	0.90	-
34	General Plant Structures	20,223	0.10	0.90	-
35	Leasehold Improvements	35,214	0.07	0.65	0.28 0.00
36	Office Furniture & Equipment	107,887	0.07	0.65	0.28 0.00
37	Warehouse Equipment	4,769	0.07	0.65	0.28 0.00
38	Tools, Shop & Garage Equipment	74,308	0.07	0.65	0.28 0.00
39	Laboratory Equipment	2,618	0.07	0.65	0.28 0.00
40	Power Operated Equipment	2,695	0.07	0.65	0.28 0.00
41	Communication Equipment	109,348	0.07	0.65	0.28 0.00
42	Miscellaneous Equipment	17,222	0.07	0.65	0.28 0.00
43	Subtotal General Plant	\$ 374,285	0.07	0.66	0.27 0.00
44					
45	Total Plant in Service	\$ 4,298,541	0.09	0.77	0.15 0.00
46					
47					
48	Advances & Contributions				
49	(T&D Mains, Fire Sprinkler Taps, Services				
50	Meters, & Hydrants)	\$ 1,747,017	0.07	0.62	0.31 0.00
51					
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53					
54					
55	<sup>1</sup> Excludes Phoenix office & meter shop				

Supporting Schedules:

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Processing Date: 3/30/2012 11:10 AM

San Manuel					
[A]	[B]	[C]	[D]	[E]	
Line No.	End of Test Year 12/31/2010	Commodity	Demand	Customer	Direct Private Fire
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55					
	Operating Expenses <sup>1</sup>				
	Source of Supply Expenses:				
	Purchased Water	0.90	0.10	-	-
	Other	0.10	0.90	-	-
	Pumping Expenses:				
	Purchased Power	0.90	0.10	-	-
	Purchased Gas	0.90	0.10	-	-
	Other	0.10	0.90	-	-
	Water Treatment Expenses	0.10	0.90	-	-
	Transmission & Distribution Expenses	0.90	0.10	-	-
	Customer Accounting Expenses	0.10	0.90	-	-
	Sales Expense	-	-	1.00	-
	Administrative & General Expenses	-	-	1.00	-
	Total Operations & Maintenance Expense	0.19	0.40	0.41	0.00
		0.43	0.32	0.25	0.00
	Depreciation & Amortization Expenses	0.09	0.77	0.15	0.00

<sup>1</sup>A&G Expense allocation ratios updated to reflect 2010 actual functional ratios. All other allocation ratios reflect those accepted in Docket No. 08-0440.

Line No.	Commodity Allocation Factor	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]	Percent of Total / Factor
1												
2												
3												
4												
5	Class											
6	Residential											
7	Commercial											
8	Industrial											
9	Other											
10												
11	Totals											
12												
13												
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16	Demand Allocation Factor											
17	Class											
18	Residential											
19	Meters/Services											
20	Equivalent Weight											
21	Equivalent Meters/Services											
22	Commercial											
23	Meters/Services											
24	Equivalent Weight											
25	Equivalent Meters/Services											
26	Industrial											
27	Meters/Services											
28	Equivalent Weight											
29	Equivalent Meters/Services											
30	Other											
31	Meters/Services											
32	Equivalent Weight											
33	Equivalent Meters/Services											
34												
35	Totals											
36												
37												
38												
39												
40	Customer Allocation Factor											
41												
42												
43	Class											
44	Residential											
45	Commercial											
46	Industrial											
47	Other											
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53												
54	*Allocation factors include customer growth											
55												

\*Allocation factors include customer growth



Line No.	Description	Oracle				
		[A]	[B]	[C]	[D]	[E]
		End of Test Year <sup>1</sup> 12/31/2010	Commodity	Demand	Customer	Direct Private Fire
1	Intangible Plant					
2	Organization	\$ -	0.10	0.90	-	-
3	Franchises	-	0.10	0.90	-	-
4	Other Intangibles	418	0.10	0.90	-	-
5	Subtotal Intangible Plant	\$ 418				
6	Source of Supply Plant					
7	Water Rights		0.10	0.90	-	-
8	Other Source of Supply Land	129,139	0.10	0.90	-	-
9	Wells - Other	24,693	0.10	0.90	-	-
10	Wells	-	0.10	0.90	-	-
11	Subtotal Source of Supply Plant	\$ 480,266				
12	Pumping Plant	\$ 634,098	0.10	0.90	-	-
13	Pumping Plant Land					
14	Pumping Plant Structures & Improvements	2,742	0.10	0.90	-	-
15	Electric Pumping Equipment	91,283	0.10	0.90	-	-
16	Gas Engine Equipment	888,753	0.10	0.90	-	-
17	Subtotal Pumping Plant	\$ -	0.10	0.90	-	-
18	Water Treatment Plant	\$ 982,778	0.10	0.90	-	-
19	Water Treatment Plant Land					
20	Water Treatment Structures & Improvements	35,054	0.10	0.90	-	-
21	Water Treatment Equipment	71,537	0.10	0.90	-	-
22	Subtotal Water Treatment Plant	\$ 106,591	0.10	0.90	-	-
23	Transmission & Distribution Plant					
24	Transmission and Distribution Land					
25	Storage Tanks	19,680	0.10	0.90	-	-
26	Transmission & Distribution Mains	306,126	0.10	0.90	-	-
27	Fire Sprinkler Taps	3,783,052	0.10	0.90	-	-
28	Services	-	-	-	-	1.00
29	Meters	684,335	-	-	1.00	-
30	Hydrants	112,379	-	-	1.00	-
31	Subtotal Transmission & Distribution Plant	\$ 158,971	-	-	1.00	-
32	General Plant	\$ 5,064,542	0.08	0.73	0.19	-
33	General Plant Land					
34	General Plant Structures	-	0.10	0.90	-	-
35	Leasehold Improvements	145,244	0.10	0.90	-	-
36	Office Furniture & Equipment	-	0.08	0.73	0.19	-
37	Warehouse Equipment	3,262	0.08	0.73	0.19	-
38	Tools, Shop & Garage Equipment	1,734	0.08	0.73	0.19	-
39	Laboratory Equipment	23,740	0.08	0.73	0.19	-
40	Power Operated Equipment	146	0.08	0.73	0.19	-
41	Communication Equipment	1,131	0.08	0.73	0.19	-
42	Miscellaneous Equipment	144,159	0.08	0.73	0.19	-
43	Subtotal General Plant	\$ 4,698	0.08	0.73	0.19	-
44	Total Plant in Service	\$ 324,113	0.09	0.81	0.10	-
45						
46		\$ 7,112,541	0.09	0.77	0.14	-
47						
48	Advances & Contributions					
49	(T&D Mains, Fire Sprinkler Taps, Services Meters, & Hydrants)					
50		\$ 4,738,736	0.08	0.72	0.20	-
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<sup>1</sup>Excludes Phoenix office & meter shop

Supporting Schedules:

		Oracle			
Line No.		[A]	[B]	[C]	[E]
		End of Test Year 12/31/2010	Commodity	Demand	Customer
1	Operating Expenses <sup>1</sup>				Direct
2	Source of Supply Expenses:				Private Fire
3	Purchased Water	\$ -	0.90	0.10	-
4	Other	4,996	0.10	0.90	-
5	Pumping Expenses:				
6	Purchased Power	107,256	0.90	0.10	-
7	Purchased Gas	-	0.90	0.10	-
8	Other	34,254	0.10	0.90	-
9	Water Treatment Expenses	21,005	0.90	0.10	-
10	Transmission & Distribution Expenses	94,494	0.10	0.90	-
11	Customer Accounting Expenses	99,824	-	-	-
12	Sales Expense	-	-	-	1.00
13	Administrative & General Expenses	131,434	0.19	0.40	1.00
14	Total Operations & Maintenance Expense	\$ 493,263	0.31	0.38	0.41
15					
16	Depreciation & Amortization Expenses	\$ 167,307	0.09	0.77	0.14
17					-
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<sup>1</sup> A&G Expense allocation ratios updated to reflect 2010 actual functional ratios. All other allocation ratios reflect those accepted in Docket No. 08-0440.

Line No.	Commodity Allocation Factor	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]
1											
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5											
6	Class										
7	Residential										
8	Commercial										
9	Industrial										
10	Other										
11	Totals										
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16											
17	Demand Allocation Factor										
18	Class										
19	Residential										
20	Meters/Services										
21	Equivalent Weight										
22	Equivalent Meters/Services										
23	Commercial										
24	Meters/Services										
25	Equivalent Weight										
26	Equivalent Meters/Services										
27	Industrial										
28	Meters/Services										
29	Equivalent Weight										
30	Equivalent Meters/Services										
31	Other										
32	Meters/Services										
33	Equivalent Weight										
34	Equivalent Meters/Services										
35	Totals										
36											
37											
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39											
40											
41											
42											
43											
44	Customer Allocation Factor										
45	Class										
46	Residential										
47	Commercial										
48	Industrial										
49	Other										
50	Totals										
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53											
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\*Allocation factors include customer growth

		SaddleBrooke Ranch			
[A]		[B]	[C]	[D]	[E]
Line No.	End of Test Year <sup>1</sup> 12/31/2010	Commodity	Demand	Customer	Direct Private Fire
1					
2	\$ -	0.10	0.90	-	-
3	-	0.10	0.90	-	-
4	-	0.10	0.90	-	-
5	\$ -	0.10	0.90	-	-
6					
7	-	0.10	0.90	-	-
8	52	0.10	0.90	-	-
9	-	0.10	0.90	-	-
10	457,306	0.10	0.90	-	-
11	\$ 457,358	0.10	0.90	-	-
12					
13	-	0.10	0.90	-	-
14	53,685	0.10	0.90	-	-
15	416,673	0.10	0.90	-	-
16	-	0.10	0.90	-	-
17	\$ 470,357	0.10	0.90	-	-
18					
19	-	0.10	0.90	-	-
20	-	0.10	0.90	-	-
21	-	0.10	0.90	-	-
22	\$ -	0.10	0.90	-	-
23					
24	-	0.10	0.90	-	-
25	-	0.10	0.90	-	-
26	2,312,748	0.10	0.90	-	1.00
27	15,243	-	-	1.00	-
28	208,294	-	-	1.00	-
29	53,814	-	-	1.00	-
30	136,178	-	-	1.00	-
31	\$ 2,726,276	0.08	0.76	0.15	0.01
32					
33	-	0.10	0.90	-	-
34	-	0.10	0.90	-	-
35	-	0.08	0.76	0.15	0.01
36	-	0.08	0.76	0.15	0.01
37	-	0.08	0.76	0.15	0.01
38	-	0.08	0.76	0.15	0.01
39	-	0.08	0.76	0.15	0.01
40	-	0.08	0.76	0.15	0.01
41	21,615	0.08	0.76	0.15	0.01
42	-	0.08	0.76	0.15	0.01
43	\$ 21,615	0.08	0.76	0.15	0.01
44					
45	\$ 3,675,606	0.09	0.80	0.11	0.00
46					
47					
48					
49					
50	\$ 2,726,276	0.08	0.76	0.15	0.01
51					
52					
53					
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55					

Advances & Contributions  
(T&D Mains, Fire Sprinkler Taps, Services  
Meters, & Hydrants)

<sup>1</sup>Excludes Phoenix office & meter shop

Supporting Schedules:

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Processing Date: 3/30/2012 11:10 AM

Recap Schedules:  
G-4 Rebuttal, G-3 Rebuttal

		SaddleBrooke Ranch				
		(A)	(B)	(C)	(D)	(E)
Line No.		End of Test Year 12/31/2010	Commodity	Demand	Customer	Direct Private Fire
1	Operating Expenses <sup>1</sup>					
2	Source of Supply Expenses:					
3	Purchased Water	\$ -	0.90	0.10	-	-
4	Other	204	0.10	0.90	-	-
5	Pumping Expenses:					
6	Purchased Power	103,754	0.90	0.10	-	-
7	Purchased Gas	-	0.90	0.10	-	-
8	Other	2,271	0.10	0.90	-	-
9	Water Treatment Expenses	634	0.90	0.10	-	-
10	Transmission & Distribution Expenses	4,418	0.10	0.90	-	-
11	Customer Accounting Expenses	6,098	-	-	-	-
12	Sales Expense	-	-	-	1.00	-
13	Administrative & General Expenses	7,149	-	-	1.00	-
14	Total Operations & Maintenance Expense	\$ 124,528	0.77	0.40	0.41	0.00
15						
16	Depreciation & Amortization Expenses	\$ 80,591	0.09	0.80	0.11	0.00
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<sup>1</sup>A&G Expense allocation ratios updated to reflect 2010 actual functional ratios. All other allocation ratios reflect those accepted in Docket No. 08-0440.

Line No.	Commodity Allocation Factor	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]
1											
2											
3											
4											
5											
6	Class										
7	Residential		4,897	24.94%							
8	Commercial		12,644	64.40%							
9	Industrial		-	0.00%							
10	Other		2,093	10.66%							
11	Totals		19,634	100.00%							
12											
13											
14											
15											
16											
17	Demand Allocation Factor										
18	Class										
19	Residential										
20	Meters/Services	76	25	-	-	-	-	-	-	-	
21	Equivalent Weight	1.0	2.5	5.0	8.0	16.0	25.0	50.0	80.0	115.0	
22	Equivalent Meters/Services	76	64	-	-	-	-	-	-	-	139
23	Commercial										
24	Meters/Services	4	1	-	6	1	-	-	-	-	
25	Equivalent Weight	1.0	2.5	5.0	8.0	16.0	25.0	50.0	80.0	115.0	64
26	Equivalent Meters/Services	4	3	-	45	12	-	-	-	-	31.00%
27	Industrial										
28	Meters/Services	-	-	-	-	-	-	-	-	-	
29	Equivalent Weight	1.0	2.5	5.0	8.0	16.0	25.0	50.0	80.0	115.0	
30	Equivalent Meters/Services	-	-	-	-	-	-	-	-	-	0.00%
31	Other										
32	Meters/Services	-	-	-	-	0	-	-	-	-	
33	Equivalent Weight	1.0	2.5	5.0	8.0	16.0	25.0	50.0	80.0	115.0	4
34	Equivalent Meters/Services	-	-	-	-	4	-	-	-	-	1.93%
35	Totals										207 100.00%
36											
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41											
42											
43											
44	Customer Allocation Factor										
45	Class										
46	Residential										
47	Commercial										
48	Industrial										
49	Other										
50	Totals										
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\*Allocation factors include customer growth

Supporting Schedules:

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Processing Date: 3/30/2012 11:10 AM

Recap Schedules:  
G-4 Rebuttal, G-3 Rebuttal

Winkelman					
Line No.	(A) End of Test Year <sup>1</sup> 12/31/2010	(B) Commodity	(C) Demand	(D) Customer	(E) Direct Private Fire
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<sup>1</sup>Excludes Phoenix office & meter shop

Supporting Schedules:

Winkelman						
	[A]	[B]	[C]	[D]	[E]	
Line No.	End of Test Year 12/31/2010	Commodity	Demand	Customer	Direct Private Fire	
1	Operating Expenses <sup>1</sup>					
2	Source of Supply Expenses:					
3	Purchased Water	\$ -	0.90	0.10	-	-
4	Other	372	0.10	0.90	-	-
5	Pumping Expenses:					
6	Purchased Power	6,511	0.90	0.10	-	-
7	Purchased Gas	-	0.90	0.10	-	-
8	Other	3,659	0.10	0.90	-	-
9	Water Treatment Expenses	8,215	0.90	0.10	-	-
10	Transmission & Distribution Expenses	10,565	0.90	0.10	-	-
11	Customer Accounting Expenses	10,444	-	0.90	-	-
12	Sales Expense	-	-	-	1.00	-
13	Administrative & General Expenses	13,240	-	-	1.00	-
14	Operations & Maintenance Expense	53,006	0.19	0.40	0.41	-
15		\$	0.32	0.38	0.30	-
16	Depreciation & Amortization Expenses	\$ 27,358	0.07	0.63	0.30	-

<sup>1</sup>A&G Expense allocation ratios updated to reflect 2010 actual functional ratios. All other allocation ratios reflect those accepted in Docket No. 08-0440.



Line No.	Commodity Allocation Factor	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]
1											
2											
3											
4											
5											
6	Class										
7	Residential										
8	Commercial										
9	Industrial										
10	Other										
11	Totals										
12											
13											
14											
15											
16											
17	Demand Allocation Factor										
18	Class										
19	Residential										
20	Meters/Services										
21	Equivalent Weight										
22	Equivalent Meters/Services										
23	Commercial										
24	Meters/Services										
25	Equivalent Weight										
26	Equivalent Meters/Services										
27	Industrial										
28	Meters/Services										
29	Equivalent Weight										
30	Equivalent Meters/Services										
31	Other										
32	Meters/Services										
33	Equivalent Weight										
34	Equivalent Meters/Services										
35	Totals										
36											
37											
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40											
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42											
43											
44											
45	Class										
46	Residential										
47	Commercial										
48	Industrial										
49	Other										
50	Totals										
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Customer Allocation Factor

Meters / Services	Bills	Percent of Total / Factor
134	1,608	87.01%
19	228	12.34%
1	12	0.65%
-	-	0.00%
154	1,848	100.00%

\*Allocation factors include customer growth

Eastern Group									
		[A]	[B]	[C]		[D]	[E]	[F]	[G]
		Company - As Filed				Company - Rebuttal			
Line No.	Customer Classification	Test Year Rates		Proposed Rates		Proposed Increase		Proposed Increase	
		Sch. H-2 Col. E	Sch. H-2 Col. F	Sch. H-2 Col. E	Sch. H-2 Col. F	Amount	%	Amount	%
1									
2									
3	Residential	\$ 15,371,629	\$ 19,493,333	\$ 4,121,704	26.81%	\$ 19,372,255	\$ 4,000,626	26.03%	26.03%
4	Commercial	3,890,028	4,774,967	884,939	22.75%	4,822,349	932,321	23.97%	23.97%
5	Industrial	76,580	86,667	10,087	13.17%	86,252	9,673	12.63%	12.63%
6	Private Fire Service	68,497	75,628	7,131	10.41%	75,628	7,131	10.41%	10.41%
7	Other Water Revenues	310,817	378,984	68,167	21.93%	383,206	72,389	23.29%	23.29%
8									
9	Total Water Revenues	\$ 19,717,550	\$ 24,809,579	\$ 5,092,029	25.82%	\$ 24,739,691	\$ 5,022,141	25.47%	25.47%
10									
11									
12	Miscellaneous Revenues	799,406	975,534	176,128	22.03%	975,534	176,128	22.03%	22.03%
13									
14	Total Operating Revenues	\$ 20,516,956	\$ 25,785,113	\$ 5,268,157	25.68%	\$ 25,715,225	\$ 5,198,269	25.34%	25.34%
15									
16									
17	Target Revenue Requirement (Sch. C-1, Ln. 10)								
18	Difference (Ln. 14 - Ln. 25)		\$ 25,785,113	\$ 25,715,224					
19	Less: Consolidated Revenue Adjustment <sup>1</sup>		\$ 0	\$ 0					
20	Over/(Short)		\$ -	\$ -					
21	%		0.00%	0.00%					

<sup>1</sup> Consolidated Revenue Adjustment represents the increase/(decrease) in revenue requirement resulting from proposed rate consolidation.

Superstition (Apache Junction, Superior, Miami)									
[A]		[B]		[C]		[D]		[E]	
Line No.		Customer Classification		Company - As Filed		Company - Rebuttal			
				Test Year Rates		Proposed Rates		Proposed Rates	
				Sch. H-2 Col. E		Sch. H-2 Col. F		Sch. H-2 Col. I	
				Amount		Amount		Amount	
				%		%		%	
1		Residential		\$ 11,436,957	\$ 14,555,439	\$ 14,580,858	\$ 3,143,902	\$ 3,143,902	27.49%
2		Commercial		2,608,590	3,190,590	3,197,568	590,978	590,978	22.67%
3		Industrial		70,149	78,895	78,895	8,746	8,746	12.47%
4		Private Fire Service		51,194	54,628	54,628	3,434	3,434	6.71%
5		Other Water Revenues		166,217	213,645	214,050	47,833	47,833	28.78%
6		Total Water Revenues		\$ 14,331,107	\$ 18,093,197	\$ 18,125,999	\$ 3,794,893	\$ 3,794,893	26.48%
7									
8									
9									
10									
11									
12		Miscellaneous Revenues		725,456	857,550	857,550	132,094	132,094	18.21%
13									
14		Total Operating Revenues		\$ 15,056,563	\$ 18,950,747	\$ 18,983,549	\$ 3,926,987	\$ 3,926,987	26.08%
15									
16									
17		Target Revenue Requirement (Sch. C-1, Ln. 10)							
18		Difference (Ln. 14 - Ln. 25)			18,950,748	18,983,549			
19		Less: Consolidated Revenue Adjustment <sup>1</sup>			\$ (0)	\$ 0			
20		Over/(Short)			\$ (0)	\$ 0			
21		%			0.00%	0.00%			
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<sup>1</sup>Consolidated Revenue Adjustment represents the increase/(decrease) in revenue requirement resulting from proposed rate consolidation.

Cochise (Bisbee, Sierra Vista)									
[A]		[B]		[C]		[D]		[E]	
				Company - As Filed				Company - Rebuttal	
Line No.	Customer Classification	Test Year Rates		Proposed Rates		Proposed Increase		Proposed Increase	
		Sch. H-2 Col. E	Sch. H-2 Col. F	Sch. H-2 Col. E	Sch. H-2 Col. F	Amount	%	Amount	%
1									
2									
3	Residential	\$ 2,270,377	\$ 2,810,078	\$ 539,700	23.77%	\$ 2,792,873	23.01%	\$ 522,495	23.01%
4	Commercial	863,168	1,019,133	155,965	18.07%	1,009,785	16.99%	146,616	16.99%
5	Industrial	3,342	3,875	533	15.96%	3,875	533	533	15.96%
6	Private Fire Service	16,647	19,893	3,246	19.50%	19,893	3,246	3,246	19.50%
7	Other Water Revenues	107,088	114,922	7,833	7.31%	113,394	6,306	6,306	5.89%
8									
9	Total Water Revenues	\$ 3,260,624	\$ 3,967,901	\$ 707,278	21.69%	\$ 3,939,820	\$ 679,197	\$ 679,197	20.83%
10									
11									
12	Miscellaneous Revenues	42,877	68,735	25,858	60.31%	68,735	25,858	25,858	60.31%
13									
14	Total Operating Revenues	\$ 3,303,500	\$ 4,036,636	\$ 733,136	22.19%	\$ 4,008,555	\$ 705,055	\$ 705,055	21.34%
15									
16									
17	Target Revenue Requirement (Sch. C-1, Ln. 10)								
18	Difference (Ln. 14 - Ln. 25)		\$ 4,036,636			\$ 4,008,556		\$ 4,008,556	
19	Less: Consolidated Revenue Adjustment <sup>1</sup>		0			(1)		(1)	
20	Over/(Short)								
21	%		0			(1)		(1)	
22			0.00%			0.00%		0.00%	
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<sup>1</sup>Consolidated Revenue Adjustment represents the increase/(decrease) in revenue requirement resulting from proposed rate consolidation.

		San Manuel									
		[A]	[B]	[C]	[D]	[E]	[F]	[G]			
		Company - As Filed					Company - Rebuttal				
Line No.	Customer Classification	Test Year Rates		Proposed Rates		Proposed Increase		Proposed Rates		Proposed Increase	
		Sch. H-2 Col. E	Sch. H-2 Col. F	Sch. H-2 Col. E	Sch. H-2 Col. F	Amount	%	Sch. H-2 Col. I	Amount	%	
1											
2											
3	Residential	\$ 763,888	\$ 1,076,848			\$ 312,961	40.97%	\$ 1,010,949	\$ 247,062	32.34%	32.34%
4	Commercial	159,464	221,979			62,516	39.20%	251,386	91,922	57.64%	57.64%
5	Industrial					-	0.00%	-	-	0.00%	0.00%
6	Private Fire Service	287	324			37	12.92%	324	37	12.92%	37
7	Other Water Revenues	8,639	11,225			2,585	29.93%	13,442	4,803	55.60%	55.60%
8											
9	Total Water Revenues	\$ 932,277	\$ 1,310,376			\$ 378,099	40.56%	\$ 1,276,102	\$ 343,824	36.88%	36.88%
10											
11											
12	Miscellaneous Revenues	15,328	24,610			9,282	60.56%	24,610	9,282	60.56%	60.56%
13											
14	Total Operating Revenues	\$ 947,605	\$ 1,334,986			\$ 387,381	40.88%	\$ 1,300,712	\$ 353,106	37.26%	37.26%
15											
16											
17	Target Revenue Requirement (Sch. C-1, Ln. 10)										
18	Difference (Ln. 14 - Ln. 25)										
19	Less: Consolidated Revenue Adjustment <sup>1</sup>										
20	Over/(Short)										
21	%										
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<sup>1</sup>Consolidated Revenue Adjustment represents the increase/(decrease) in revenue requirement resulting from proposed rate consolidation.

Line No.	Customer Classification	Oracle									
		[A]		[B]		[C]		[D]		[E]	
		Test Year Rates		Proposed Rates		Company - As Filed		Proposed Increase		Company - Rebuttal	
		Sch. H-2 Col. E	Sch. H-2 Col. F	Sch. H-2 Col. E	Sch. H-2 Col. F	Amount	%	Amount	%	Proposed Increase Amount	%
1											
2	Residential	\$ 801,039	\$ 915,489			\$ 114,450	14.29%	\$ 856,189	6.88%	\$ 55,150	6.88%
3	Commercial	156,439	180,318			23,879	15.26%	197,509	26.25%	41,070	26.25%
4	Industrial	-	-			-	0.00%	-	0.00%	-	0.00%
5	Private Fire Service	283	324			41	14.36%	324	14.36%	41	14.36%
6	Other Water Revenues	19,841	23,223			3,383	17.05%	26,644	34.29%	6,803	34.29%
7											
8	Total Water Revenues	\$ 977,602	\$ 1,119,354			\$ 141,752	14.50%	\$ 1,080,666	10.54%	\$ 103,064	10.54%
9											
10											
11	Miscellaneous Revenues	12,494	19,212			6,718	53.77%	19,212	53.77%	6,718	53.77%
12											
13											
14	Total Operating Revenues	\$ 990,095	\$ 1,138,566			\$ 148,470	15.00%	\$ 1,099,877	11.09%	\$ 109,782	11.09%
15											
16											
17											
18	Target Revenue Requirement (Sch. C-1, Ln. 10)										
19	Difference (Ln. 14 - Ln. 25)					1,116,711		1,120,928			
20	Less: Consolidated Revenue Adjustment <sup>1</sup>			\$ 21,855		21,855		(21,051)			
21	Over/(Short)			\$				(21,051)			
22	%							0			
23								0.00%			
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<sup>1</sup>Consolidated Revenue Adjustment represents the increase/(decrease) in revenue requirement resulting from proposed rate consolidation.

Supporting Schedules:  
H-2 Rebuttal

SaddleBrooke Ranch									
Line No.	Customer Classification	[A]		[B]		[C]		[D]	
		Test Year Rates		Proposed Rates		Company - As Filed		Company - Rebuttal	
		Sch. H-2 Col. E	Sch. H-2 Col. F	Sch. H-2 Col. E	Sch. H-2 Col. F	Proposed Increase Amount	%	Proposed Increase Amount	%
1		\$ 45,127	\$ 65,719	\$ 20,591	45.63%	\$ 15,976	35.40%	\$ 15,976	35.40%
2	Residential	61,277	105,785	44,508	72.63%	47,180	76.99%	47,180	76.99%
3	Commercial	-	-	-	0.00%	-	0.00%	-	0.00%
4	Industrial	85	459	374	440.00%	374	440.00%	374	440.00%
5	Private Fire Service	9,032	15,970	6,938	76.82%	6,644	73.56%	6,644	73.56%
6	Other Water Revenues								
7									
8									
9	Total Water Revenues	\$ 115,521	\$ 187,932	\$ 72,411	62.68%	\$ 70,173	60.75%	\$ 70,173	60.75%
10									
11									
12	Miscellaneous Revenues	1,582	2,884	1,302	82.31%	1,302	82.31%	1,302	82.31%
13									
14	Total Operating Revenues	\$ 117,103	\$ 190,816	\$ 73,713	62.95%	\$ 71,475	61.04%	\$ 71,475	61.04%
15									
16									
17	Target Revenue Requirement (Sch. C-1, Ln. 10)								
18	Difference (Ln. 14 - Ln. 25)			227,687		244,673		244,673	
19				\$ (36,871)		\$ (56,095)		\$ (56,095)	
20	Less: Consolidated Revenue Adjustment <sup>1</sup>			\$ (36,871)	(San Manuel/Oracle/	\$ (56,095)	(San Manuel/Oracle/	\$ (56,095)	(San Manuel/Oracle/
21	Over/(Short)			\$ 0	SaddleBrooke)	\$ 0	SaddleBrooke)	\$ 0	SaddleBrooke)
22	%			0.00%		0.00%		0.00%	
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<sup>1</sup>Consolidated Revenue Adjustment represents the increase/(decrease) in revenue requirement resulting from proposed rate consolidation.

Winkelman									
	[A]	[B]	[C]	[D]	[E]	[F]	[G]		
Line No.	Company - As Filed				Company - Rebuttal				
	Test Year Rates Sch. H-2 Col. E	Proposed Rates Sch. H-2 Col. F	Proposed Increase Amount	%	Proposed Rates Sch. H-2 Col. I	Proposed Increase Amount	%		
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Eastern Group												
[A]	[B]	[C]	[D]	[E]	[F]	[G]		[H]	[I]	[J]	[K]	
Bill Count Water Revenues												
Line No.	Detail Class of Service	Average Number of Customers	Average Consumption	Test Year Rates	Cust. Growth Adjustment (IS-Z)	Adjusted T.Y. Rates [C + D]	Company - As Filed		Company - Rebuttal		%	%
							Proposed Rates	Increase [E - F]	Proposed Rates	Increase [I - J]		
1												
2	Residential 5/8 x 3/4 -inch	29,748	6,313	\$ 12,505,841	\$ 4,488	\$ 12,510,329	\$ 15,919,248	\$ 3,408,919	\$ 15,801,312	\$ 3,290,983	26.31%	26.31%
3	Residential 1-inch	1,721	10,591	1,595,791	5,250	1,601,041	1,993,307	392,266	1,987,352	386,311	24.13%	24.13%
4	Residential 1.5-inch										0.00%	0.00%
5	Residential 2-inch	64	131,798	422,771	310	423,082	524,093	101,012	524,172	101,090	23.89%	23.89%
6	Residential 3-inch	4	272,408	52,241	33	52,274	65,984	13,710	66,153	13,879	26.55%	26.55%
7	Residential 4-inch	10	622,119	297,002	188	297,190	373,898	76,708	374,954	77,764	26.17%	26.17%
8	Residential 6-inch	13	713,057	487,406	307	487,713	616,802	129,089	618,312	130,599	26.78%	26.78%
9	Residential 8-inch	-	-	-	-	-	-	-	-	-	0.00%	0.00%
10	Residential 10-inch	-	-	-	-	-	-	-	-	-	0.00%	0.00%
11	Commercial 5/8 x 3/4 -inch	798	6,262	376,640	226	376,866	468,705	91,839	478,637	101,771	27.00%	27.00%
12	Commercial 1-inch	413	21,848	570,218	3,447	573,666	703,150	129,484	710,680	137,014	23.88%	23.88%
13	Commercial 1.5-inch										0.00%	0.00%
14	Commercial 2-inch	327	82,468	1,655,453	14,129	1,669,582	2,038,215	368,633	2,043,485	373,903	22.39%	22.39%
15	Commercial 3-inch	35	207,275	359,087	2,114	361,200	450,685	89,484	453,983	92,783	25.69%	25.69%
16	Commercial 4-inch	20	296,608	311,183	562	311,745	382,139	70,394	384,261	72,516	23.26%	23.26%
17	Commercial 6-inch	16	598,482	546,582	1,788	548,370	671,684	123,314	690,859	142,489	25.98%	25.98%
18	Commercial 8-inch	2	184,929	48,066	533	48,599	60,389	11,790	60,444	11,845	24.37%	24.37%
19	Commercial 10-inch	-	-	-	-	-	-	-	-	-	0.00%	0.00%
20	Industrial 5/8 x 3/4 -inch	-	-	-	-	-	-	-	-	-	0.00%	0.00%
21	Industrial 1-inch	4	5,235	3,209	-	3,209	4,287	1,077	4,287	1,077	33.57%	33.57%
22	Industrial 1.5-inch	-	-	-	-	-	-	-	-	-	0.00%	0.00%
23	Industrial 2-inch	6	210,983	52,276	-	52,276	57,311	5,036	58,897	4,621	8.84%	8.84%
24	Industrial 3-inch	2	211,104	21,095	-	21,095	25,069	3,974	25,069	3,974	18.84%	18.84%
25	Industrial 4-inch	-	-	-	-	-	-	-	-	-	0.00%	0.00%
26	Industrial 6-inch	-	-	-	-	-	-	-	-	-	0.00%	0.00%
27	Industrial 8-inch	-	-	-	-	-	-	-	-	-	0.00%	0.00%
28	Industrial 10-inch	-	-	-	-	-	-	-	-	-	0.00%	0.00%
29	Private Fire Service	224	-	68,497	-	68,497	75,628	7,131	75,628	7,131	10.41%	10.41%
30	Other Water Revenues	-	-	-	-	-	-	-	-	-	0.00%	0.00%
31	Public Fire Hydrant	-	-	-	-	-	-	-	-	-	0.00%	0.00%
32	Coin Machine	-	-	19,775	-	19,775	24,909	5,134	24,996	5,221	26.40%	26.40%
33	Construction Water 2-inch	-	-	-	-	-	-	-	-	-	0.00%	0.00%
34	Construction Water 3-inch	29	-	232,190	-	232,190	289,109	56,919	293,870	61,680	26.56%	26.56%
35	Construction Water 4-inch	2	427,857	52,481	-	52,481	56,631	4,149	55,989	3,507	6.68%	6.68%
36	Sales for Resale 5/8 x 3/4-inch	-	-	-	-	-	-	-	-	-	0.00%	0.00%
37	Sales for Resale 1-inch	-	-	-	-	-	-	-	-	-	0.00%	0.00%
38	Sales for Resale 1.5-inch	-	-	-	-	-	-	-	-	-	0.00%	0.00%
39	Sales for Resale 2-inch	-	-	-	-	-	-	-	-	-	0.00%	0.00%
40	Sales for Resale 3-inch	-	-	-	-	-	-	-	-	-	0.00%	0.00%
41	Sales for Resale 4-inch	-	-	-	-	-	-	-	-	-	0.00%	0.00%
42	Sales for Resale 6-inch	-	-	-	-	-	-	-	-	-	0.00%	0.00%
43	Sales for Resale 8-inch	0	451,000	6,370	-	6,370	8,335	1,965	8,352	1,982	31.11%	31.11%
44	Sales for Resale 10-inch	-	-	-	-	-	-	-	-	-	0.00%	0.00%
45		-	-	-	-	-	-	-	-	-	0.00%	0.00%
46	Totals	33,437	8,997	\$ 19,684,174	\$ 33,377	\$ 19,717,550	\$ 24,809,579	\$ 5,092,029	\$ 24,739,691	\$ 5,022,141	25.82%	25.47%
47												

Eastern Group												
[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]	[K]		
Bill Count Water Revenues												
Line No.	Summary Class of Service	Average Number of Customers	Average Consumption	Test Year Rates	Cust. Growth Adjustment (IS-7)	Adjusted T.Y. Rates [C + D]	Company - As Filed		Company - Rebuttal			
							Proposed Rates	Increase [F - E]	Proposed Rates	Increase [I - E]		
1												
2	Total Residential	31,560	7,335	\$ 15,361,051	\$ 10,578	\$ 15,371,629	\$ 19,493,333	\$ 4,121,704	26.81%	\$ 19,372,255	\$ 4,000,626	26.03%
3	Total Commercial	1,611	39,554	3,867,229	22,799	3,890,028	4,774,967	884,939	22.75%	4,822,349	932,321	23.97%
4	Total Industrial	12	142,421	76,580	-	76,580	86,667	10,087	13.17%	86,252	9,673	12.63%
5	Total Private Fire	224	-	68,497	-	68,497	75,628	7,131	10.41%	75,628	7,131	10.41%
6	Total Other Water Revenues	31	127,433	310,817	-	310,817	378,984	68,167	21.93%	383,206	72,389	23.29%
7												
8	Totals	33,437	8,997	\$ 19,684,174	\$ 33,377	\$ 19,717,550	\$ 24,809,579	\$ 5,092,029	25.82%	\$ 24,739,691	\$ 5,022,141	25.47%
9												
10	Miscellaneous Revenues	-	-	-	-	799,406	975,534	176,128	22.03%	975,534	176,128	22.03%
11	Total Revenue Generated			799,406			\$ 25,785,113			\$ 25,715,225		
12												
13	Target Rev. Rqmt. (Sch. C-1)						25,785,113			25,715,224		
14	Difference						\$ 0			\$ 0		
15												
16	Less: Consolidated Revenue Adj.						-			-		
17	Over(Short)						\$ 0			\$ 0		
18	%						0.00%			0.00%		

Superstition (Apache Junction, Superior, Miami)										
[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]	[K]
Line No.	Detail Class of Service	Average Number of Customers	Average Consumption	Test Year Rates	Cust. Growth Adjustment (US-7)	Adjusted T.Y. Rates [C+D]	Bill Count Water Revenues			
							Proposed Rates	Company - As Filed Increase [F-E]	Proposed Rates	Company - Rebuttal Increase [I-J]
1	Residential 5/8 x 3/4 -inch	21,019	6,321	\$ 8,823,244	\$ 1,080	\$ 8,824,323	\$ 11,277,831	\$ 2,453,507	\$ 11,296,942	\$ 2,472,619
2	Residential 1-inch	1,552	10,308	1,418,049	858	1,418,907	1,770,407	351,500	1,772,846	353,938
3	Residential 1.5-inch	-	-	-	-	-	-	-	-	-
4	Residential 2-inch	57	124,157	356,351	198	356,549	450,517	93,968	451,651	95,102
5	Residential 3-inch	4	272,408	52,241	33	52,274	65,984	13,710	66,153	13,879
6	Residential 4-inch	10	622,119	297,002	188	297,190	373,898	76,708	374,954	77,764
7	Residential 6-inch	13	713,057	487,406	307	487,713	616,802	129,089	618,312	130,599
8	Residential 8-inch	-	-	-	-	-	-	-	-	-
9	Residential 10-inch	-	-	-	-	-	-	-	-	-
10	Commercial 5/8 x 3/4 -inch	383	7,468	195,193	724	195,917	241,943	46,026	242,417	46,500
11	Commercial 1-inch	292	24,040	430,963	3,622	434,585	530,306	95,720	531,448	96,863
12	Commercial 1.5-inch	-	-	-	-	-	-	-	-	-
13	Commercial 2-inch	220	74,878	1,007,746	7,622	1,015,368	1,239,887	224,519	1,242,510	227,142
14	Commercial 3-inch	25	209,084	285,185	2,161	287,346	352,369	65,023	353,212	65,866
15	Commercial 4-inch	11	277,033	177,822	1,312	179,134	219,819	40,685	220,321	41,187
16	Commercial 6-inch	12	718,648	441,632	4,008	445,640	545,877	100,237	547,216	101,575
17	Commercial 8-inch	2	184,929	48,066	533	48,599	60,389	11,790	60,444	11,845
18	Commercial 10-inch	-	-	-	-	-	-	-	-	-
19	Industrial 5/8 x 3/4 -inch	-	-	-	-	-	-	-	-	-
20	Industrial 1-inch	3	5,911	2,248	-	2,248	3,195	-	3,195	947
21	Industrial 1.5-inch	-	-	-	-	-	-	-	-	-
22	Industrial 2-inch	4	299,202	46,805	-	46,805	50,631	3,825	50,631	3,825
23	Industrial 3-inch	2	211,104	21,095	-	21,095	25,069	3,974	25,069	3,974
24	Industrial 4-inch	-	-	-	-	-	-	-	-	-
25	Industrial 6-inch	-	-	-	-	-	-	-	-	-
26	Industrial 8-inch	-	-	-	-	-	-	-	-	-
27	Industrial 10-inch	-	-	-	-	-	-	-	-	-
28	Private Fire Service	-	-	-	-	-	-	-	-	-
29	Other Water Revenues	163	-	51,194	-	51,194	54,628	3,434	54,628	3,434
30	Public Fire Hydrant	-	-	-	-	-	-	-	-	-
31	Coin Machine	-	-	19,775	-	19,775	24,909	5,134	24,996	5,221
32	Construction Water 2-inch	-	-	-	-	-	-	-	-	-
33	Construction Water 3-inch	-	-	-	-	-	-	-	-	-
34	Construction Water 4-inch	20	85,035	129,262	-	129,262	166,471	37,210	166,748	37,486
35	Sales for Resale 5/8 x 3/4 -inch	1	162,250	10,810	-	10,810	13,929	3,120	13,954	3,144
36	Sales for Resale 1-inch	-	-	-	-	-	-	-	-	-
37	Sales for Resale 1.5-inch	-	-	-	-	-	-	-	-	-
38	Sales for Resale 2-inch	-	-	-	-	-	-	-	-	-
39	Sales for Resale 3-inch	-	-	-	-	-	-	-	-	-
40	Sales for Resale 4-inch	-	-	-	-	-	-	-	-	-
41	Sales for Resale 6-inch	-	-	-	-	-	-	-	-	-
42	Sales for Resale 8-inch	0	451,000	6,370	-	6,370	8,335	1,965	8,352	1,982
43	Sales for Resale 10-inch	-	-	-	-	-	-	-	-	-
44	Sales for Resale 10-inch	-	-	-	-	-	-	-	-	-
45	Totals	23,792	9,240	\$ 14,308,460	\$ 22,647	\$ 14,331,107	\$ 18,093,197	\$ 3,762,091	\$ 18,125,999	\$ 3,794,893
46								26.25%		26.48%
47										
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Supersitition (Apache Junction, Superior, Miami)										
[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]	[K]
Bill Count Water Revenues										
Line No.	Summary Class of Service	Average Number of Customers	Average Consumption	Test Year Rates	Cust. Growth Adjustment (IS-Z)	Adjusted T.Y. Rates [C + D]	Company - As Filed		Company - Rebuttal	
							Proposed Rates	Increase [F - E]	Proposed Rates	Increase [I - E]
1										
2	Total Residential	22,655	7,633	\$ 11,434,292	\$ 2,665	\$ 11,436,957	\$ 14,555,439	\$ 3,118,483	\$ 14,580,858	\$ 3,143,902
3	Total Commercial	944	45,878	2,586,608	19,982	2,606,590	3,190,590	584,000	3,197,568	590,978
4	Total Industrial	9	181,861	70,149	-	70,149	78,895	8,746	78,895	8,746
5	Total Private Fire	163	-	51,194	-	51,194	54,628	3,434	54,628	3,434
6	Total Other Water Revenues	21	93,069	166,217	-	166,217	213,645	47,428	214,050	47,833
7										
8	Totals	23,792	9,240	\$ 14,308,460	\$ 22,647	\$ 14,331,107	\$ 18,093,197	\$ 3,762,091	\$ 18,125,999	\$ 3,794,893
9										
10	Miscellaneous Revenues	-	-	725,456	-	725,456	857,550	132,094	857,550	132,094
11	Total Revenue Generated			725,456			\$ 18,950,747		\$ 18,983,550	
12										
13	Target Rev. Rqmt. (Sch. C-1)						18,950,748		18,983,549	
14	Difference						\$ (0)		\$ 0	
15										
16	Less: Consolidated Revenue Adj.						-		-	
17	Over/(Short)						(0)		0	
18	%						0.00%		0.00%	

Cochise (Bisbee, Sierra Vista)																	
[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]	[K]							
Line No.	Detail Class of Service	Average Number of Customers	Average Consumption	Test Year Rates	Cust. Growth Adjustment (IS-7)	Adjusted T.Y. Rates (IC + D)	Bill Count Water Revenues		Company - Rebuttal								
							Proposed Rates	Increase (F - E)	Proposed Rates	Increase (I - E)							
1								%		%							
2	Residential 5/8 x 3/4 -inch	5,775	6,319	\$ 2,125,490	\$ 5,376	\$ 2,130,866	\$ 2,646,896	\$ 516,029	\$ 2,630,817	\$ 499,950	23.46%						
3	Residential 1-inch	91	14,440	80,025	199	80,223	97,820	17,597	97,330	17,106	21.32%						
4	Residential 1.5-inch	-	-	-	-	-	-	-	-	-	0.00%						
5	Residential 2-inch	7	188,514	59,135	152	59,288	65,362	6,074	64,727	5,439	9.17%						
6	Residential 3-inch	-	-	-	-	-	-	-	-	-	0.00%						
7	Residential 4-inch	-	-	-	-	-	-	-	-	-	0.00%						
8	Residential 6-inch	-	-	-	-	-	-	-	-	-	0.00%						
9	Residential 8-inch	-	-	-	-	-	-	-	-	-	0.00%						
10	Residential 10-inch	-	-	-	-	-	-	-	-	-	0.00%						
11	Commercial 5/8 x 3/4 -inch	279	4,942	109,891	908	110,799	137,120	26,321	136,046	25,247	22.79%						
12	Commercial 1-inch	88	17,688	99,969	611	100,580	122,098	21,517	121,129	20,549	20.43%						
13	Commercial 1.5-inch	-	-	-	-	-	-	-	-	-	0.00%						
14	Commercial 2-inch	85	97,862	497,113	3,396	500,509	574,813	74,304	568,730	68,221	13.63%						
15	Commercial 3-inch	7	224,956	54,612	(112)	54,500	70,847	16,347	70,570	16,070	29.49%						
16	Commercial 4-inch	6	334,708	96,335	445	96,780	114,255	17,475	113,309	16,530	17.08%						
17	Commercial 6-inch	-	-	-	-	-	-	-	-	-	0.00%						
18	Commercial 8-inch	-	-	-	-	-	-	-	-	-	0.00%						
19	Commercial 10-inch	-	-	-	-	-	-	-	-	-	0.00%						
20	Industrial 5/8 x 3/4 -inch	-	-	-	-	-	-	-	-	-	0.00%						
21	Industrial 1-inch	1	3,208	961	-	961	1,091	130	1,091	130	13.58%						
22	Industrial 1.5-inch	-	-	-	-	-	-	-	-	-	0.00%						
23	Industrial 2-inch	1	-	2,381	-	2,381	2,784	403	2,784	403	16.92%						
24	Industrial 3-inch	-	-	-	-	-	-	-	-	-	0.00%						
25	Industrial 4-inch	-	-	-	-	-	-	-	-	-	0.00%						
26	Industrial 6-inch	-	-	-	-	-	-	-	-	-	0.00%						
27	Industrial 8-inch	-	-	-	-	-	-	-	-	-	0.00%						
28	Industrial 10-inch	-	-	-	-	-	-	-	-	-	0.00%						
29	Private Fire Service	58	-	16,647	-	16,647	19,893	3,246	19,893	3,246	19.50%						
30	Other Water Revenues	-	-	-	-	-	-	-	-	-	0.00%						
31	Public Fire Hydrant	-	-	-	-	-	-	-	-	-	0.00%						
32	Coin Machine	-	-	-	-	-	-	-	-	-	0.00%						
33	Construction Water 2-Inch	-	-	-	-	-	-	-	-	-	0.00%						
34	Construction Water 3-Inch	5	193,075	65,417	-	65,417	72,220	6,803	71,359	5,943	9.08%						
35	Construction Water 4-Inch	1	782,000	41,672	-	41,672	42,702	1,030	42,035	363	0.87%						
36	Sales for Resale 5/8 x 3/4-Inch	-	-	-	-	-	-	-	-	-	0.00%						
37	Sales for Resale 1-Inch	-	-	-	-	-	-	-	-	-	0.00%						
38	Sales for Resale 1.5-Inch	-	-	-	-	-	-	-	-	-	0.00%						
39	Sales for Resale 2-Inch	-	-	-	-	-	-	-	-	-	0.00%						
40	Sales for Resale 3-Inch	-	-	-	-	-	-	-	-	-	0.00%						
41	Sales for Resale 4-Inch	-	-	-	-	-	-	-	-	-	0.00%						
42	Sales for Resale 6-Inch	-	-	-	-	-	-	-	-	-	0.00%						
43	Sales for Resale 8-Inch	-	-	-	-	-	-	-	-	-	0.00%						
44	Sales for Resale 10-Inch	-	-	-	-	-	-	-	-	-	0.00%						
45		-	-	-	-	-	-	-	-	-	0.00%						
Totals							6,404	8,672	\$ 3,249,647	\$ 10,976	\$ 3,260,624	\$ 3,967,901	\$ 707,278	21.69%	\$ 3,939,820	\$ 679,197	20.83%

Cochise (Bisbee, Sierra Vista)											
[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]	[K]	
Bill Count Water Revenues											
Line No.	Average Number of Customers	Average Consumption	Test Year Rates	Cust. Growth Adjustment (IS-7)	Adjusted T.Y. Rates [C + D]	Company - As Filed		Company - Rebuttal			
						Proposed Rates	Increase [F - E]	Proposed Rates	Increase [I - E]		
1	5,873	6,661	\$ 2,264,650	\$ 5,727	\$ 2,270,377	\$ 2,810,078	\$ 539,700	23.77%	\$ 2,792,873	\$ 522,495	23.01%
2	466	31,939	857,920	5,249	863,168	1,019,133	155,965	18.07%	1,009,785	146,616	16.99%
3	2	1,604	3,342	-	3,342	3,875	533	15.96%	3,875	533	15.96%
4	58	-	16,647	-	16,647	19,893	3,246	19.50%	19,893	3,246	19.50%
5	6	271,021	107,088	-	107,088	114,922	7,833	7.31%	113,394	6,306	5.89%
6											
7											
8	6,404	8,672	\$ 3,249,647	\$ 10,976	\$ 3,260,624	\$ 3,967,901	\$ 707,278	21.69%	\$ 3,939,820	\$ 679,197	20.83%
9											
10											
11	-	-	42,877	-	42,877	68,735	25,858	60.31%	68,735	25,858	60.31%
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Target Rev. Rqmt. (Sch. C-1)  
Difference  
Less: Consolidated Revenue Adj.  
Over/(Short)  
%

San Manuel														
[A]	[B]	[C]	[D]	[E]	[F]	Bill Count Water Revenues			[I]	[J]	[K]			
Line No.	Detail Class of Service	Average Number of Customers	Average Consumption	Test Year Rates	Cust. Growth Adjustment (IS-7)	Adjusted T.Y. Rates (C+D)	Company - As Filed		Company - Rebuttal		%			
							Proposed Rates	Increase (F-E)	Proposed Rates	Increase (I-J)				
1														
2	Residential 5/8 x 3/4 -inch	1,397	7,139	\$	(3,908)	\$	753,103	\$	1,061,561	\$	996,542	\$	243,440	32.32%
3	Residential 1-inch	6	24,753	10,843			10,785		15,287		14,407		3,622	33.58%
4	Residential 1.5-inch	-	-	-	-	-	-	-	-	-	-	-	-	0.00%
5	Residential 2-inch	-	-	-	-	-	-	-	-	-	-	-	-	0.00%
6	Residential 3-inch	-	-	-	-	-	-	-	-	-	-	-	-	0.00%
7	Residential 4-inch	-	-	-	-	-	-	-	-	-	-	-	-	0.00%
8	Residential 6-inch	-	-	-	-	-	-	-	-	-	-	-	-	0.00%
9	Residential 8-inch	-	-	-	-	-	-	-	-	-	-	-	-	0.00%
10	Residential 10-inch	-	-	-	-	-	-	-	-	-	-	-	-	0.00%
11	Commercial 5/8 x 3/4 -inch	44	6,464	24,104			23,836		34,065		37,685		13,849	58.10%
12	Commercial 1-inch	14	17,335	19,965	(268)	(222)	19,743		28,699		31,517		11,773	59.63%
13	Commercial 1.5-inch	-	-	-	-	-	-	-	-	-	-	-	-	0.00%
14	Commercial 2-inch	8	76,646	44,009	(487)		43,522		65,551		70,062		26,541	60.98%
15	Commercial 3-inch	1	39,192	5,721	(67)		5,653		7,115		8,697		3,044	53.84%
16	Commercial 4-inch	1	120,167	11,327	(133)		11,194		15,253		17,523		6,329	56.54%
17	Commercial 6-inch	3	142,839	56,176	(660)		55,516		71,296		85,902		30,387	54.74%
18	Commercial 8-inch	-	-	-	-	-	-	-	-	-	-	-	-	0.00%
19	Commercial 10-inch	-	-	-	-	-	-	-	-	-	-	-	-	0.00%
20	Industrial 5/8 x 3/4 -inch	-	-	-	-	-	-	-	-	-	-	-	-	0.00%
21	Industrial 1-inch	-	-	-	-	-	-	-	-	-	-	-	-	0.00%
22	Industrial 1.5-inch	-	-	-	-	-	-	-	-	-	-	-	-	0.00%
23	Industrial 2-inch	-	-	-	-	-	-	-	-	-	-	-	-	0.00%
24	Industrial 3-inch	-	-	-	-	-	-	-	-	-	-	-	-	0.00%
25	Industrial 4-inch	-	-	-	-	-	-	-	-	-	-	-	-	0.00%
26	Industrial 6-inch	-	-	-	-	-	-	-	-	-	-	-	-	0.00%
27	Industrial 8-inch	-	-	-	-	-	-	-	-	-	-	-	-	0.00%
28	Industrial 10-inch	-	-	-	-	-	-	-	-	-	-	-	-	0.00%
29	Private Fire Service	1	-	287	-	-	287		324		324		37	12.92%
30	Other Water Revenues	-	-	-	-	-	-	-	-	-	-	-	-	0.00%
31	Public Fire Hydrant	-	-	-	-	-	-	-	-	-	-	-	-	0.00%
32	Coin Machine	-	-	-	-	-	-	-	-	-	-	-	-	0.00%
33	Construction Water 2-inch	-	-	-	-	-	-	-	-	-	-	-	-	0.00%
34	Construction Water 3-inch	-	-	-	-	-	-	-	-	-	-	-	-	0.00%
35	Construction Water 4-inch	1	48,341	8,639	-	-	8,639		11,225		13,442		4,803	55.60%
36	Sales for Resale 5/8 x 3/4-inch	-	-	-	-	-	-	-	-	-	-	-	-	0.00%
37	Sales for Resale 1-inch	-	-	-	-	-	-	-	-	-	-	-	-	0.00%
38	Sales for Resale 1.5-inch	-	-	-	-	-	-	-	-	-	-	-	-	0.00%
39	Sales for Resale 2-inch	-	-	-	-	-	-	-	-	-	-	-	-	0.00%
40	Sales for Resale 3-inch	-	-	-	-	-	-	-	-	-	-	-	-	0.00%
41	Sales for Resale 4-inch	-	-	-	-	-	-	-	-	-	-	-	-	0.00%
42	Sales for Resale 6-inch	-	-	-	-	-	-	-	-	-	-	-	-	0.00%
43	Sales for Resale 8-inch	-	-	-	-	-	-	-	-	-	-	-	-	0.00%
44	Sales for Resale 10-inch	-	-	-	-	-	-	-	-	-	-	-	-	0.00%
45		-	-	-	-	-	-	-	-	-	-	-	-	0.00%
46	Totals	1,476	8,073	\$	(5,803)	\$	932,277	\$	1,310,376	\$	1,276,102	\$	343,824	36.88%
47														

San Manuel											
	(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)
Line No.	Summary Class of Service	Average Number of Customers	Average Consumption	Test Year Rates	Cust. Growth Adjustment (IS-Z)	Adjusted T.Y. Rates [C + D]	Bill Count Water Revenues				
							Proposed Rates	Company - As Filed Increase [F - E]	Proposed Rates	Company - Rebuttal Increase [I - E]	%
1											
2	Total Residential	1,403	7,214	\$ 767,853	\$ (3,965)	\$ 763,888	\$ 1,076,848	\$ 312,961	\$ 1,010,949	\$ 247,062	32.34%
3	Total Commercial	71	24,382	161,301	(1,838)	159,464	221,979	62,516	251,386	91,922	57.64%
4	Total Industrial	-	-	-	-	-	-	-	-	-	0.00%
5	Total Private Fire	1	-	287	-	287	324	37	324	37	12.92%
6	Total Other Water Revenues	1	48,341	8,639	-	8,639	11,225	2,585	13,442	4,803	55.60%
7											
8	Totals	1,476	8,073	\$ 938,081	\$ (5,803)	\$ 932,277	\$ 1,310,376	\$ 378,099	\$ 1,276,102	\$ 343,824	36.88%
9											
10	Miscellaneous Revenues	-	-	15,328	-	15,328	24,610	9,282	24,610	9,282	60.56%
11	Total Revenue Generated						\$ 1,334,986		\$ 1,300,712		
12											
13	Target Rev. Rqmt. (Sch. C-1)										
14	Difference										
15							\$ 1,319,969		1,223,565		
16							\$ 15,017		\$ 77,147		
17	Less: Consolidated Revenue Adj. Over/(Short)						15,017	(San Manuel/Oracle/ SaddleBrooke)	77,147	(San Manuel/Oracle/ SaddleBrooke)	
18	%						\$ 0		\$ 0		0.00%
19											



Oracle													
[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]	[K]			
Line No.	Detail Class of Service	Average Number of Customers	Average Consumption	Test Year Rates	Cust. Growth Adjustment (I-S-Z)	Adjusted T.Y. Rates (C + D)	Bill Count Water Revenues			Company - Rebuttal Increase (I - E)	%		
							Proposed Rates	Increase (F - E)	%				
1	Residential 5/8 x 3/4 -inch	1,367	5,140	\$ 728,522	\$ (3,901)	\$ 724,621	\$ 829,750	\$ 105,129	\$ 775,892	\$ 51,270	14.51%	7.08%	
2	Residential 1-inch	51	11,188	69,537	(364)	69,173	77,524	8,352	72,504	3,331	12.07%	4.82%	
3	Residential 1.5-inch	-	-	-	-	-	-	-	-	-	0.00%	0.00%	
4	Residential 2-inch	0	221,080	7,286	(40)	7,245	8,215	969	7,794	549	13.38%	7.57%	
5	Residential 3-inch	-	-	-	-	-	-	-	-	-	0.00%	0.00%	
6	Residential 4-inch	-	-	-	-	-	-	-	-	-	0.00%	0.00%	
7	Residential 6-inch	-	-	-	-	-	-	-	-	-	0.00%	0.00%	
8	Residential 8-inch	-	-	-	-	-	-	-	-	-	0.00%	0.00%	
9	Residential 10-inch	-	-	-	-	-	-	-	-	-	0.00%	0.00%	
10	Commercial 5/8 x 3/4 -inch	74	4,471	39,710	(1,278)	38,432	44,435	6,003	51,030	12,598	15.62%	32.78%	
11	Commercial 1-inch	17	7,013	17,953	(599)	17,354	20,064	2,710	24,219	6,865	15.62%	39.56%	
12	Commercial 1.5-inch	-	-	-	-	-	-	-	-	-	0.00%	0.00%	
13	Commercial 2-inch	7	93,190	55,134	(1,695)	53,439	61,308	7,868	64,519	11,080	14.72%	20.73%	
14	Commercial 3-inch	-	-	-	-	-	-	-	-	-	0.00%	0.00%	
15	Commercial 4-inch	-	-	-	-	-	-	-	-	-	0.00%	0.00%	
16	Commercial 6-inch	1	563,483	48,774	(1,560)	47,214	54,511	7,297	57,741	10,527	15.46%	22.30%	
17	Commercial 8-inch	-	-	-	-	-	-	-	-	-	0.00%	0.00%	
18	Commercial 10-inch	-	-	-	-	-	-	-	-	-	0.00%	0.00%	
19	Industrial 5/8 x 3/4 -inch	-	-	-	-	-	-	-	-	-	0.00%	0.00%	
20	Industrial 1-inch	-	-	-	-	-	-	-	-	-	0.00%	0.00%	
21	Industrial 1.5-inch	-	-	-	-	-	-	-	-	-	0.00%	0.00%	
22	Industrial 2-inch	-	-	-	-	-	-	-	-	-	0.00%	0.00%	
23	Industrial 3-inch	-	-	-	-	-	-	-	-	-	0.00%	0.00%	
24	Industrial 4-inch	-	-	-	-	-	-	-	-	-	0.00%	0.00%	
25	Industrial 6-inch	-	-	-	-	-	-	-	-	-	0.00%	0.00%	
26	Industrial 8-inch	-	-	-	-	-	-	-	-	-	0.00%	0.00%	
27	Industrial 10-inch	-	-	-	-	-	-	-	-	-	0.00%	0.00%	
28	Private Fire Service	1	-	283	-	283	324	41	324	41	14.36%	14.36%	
29	Other Water Revenues	-	-	-	-	-	-	-	-	-	-	-	
30	Public Fire Hydrant	-	-	-	-	-	-	-	-	-	-	-	
31	Coin Machine	-	-	-	-	-	-	-	-	-	-	-	
32	Construction Water 2-Inch	-	-	-	-	-	-	-	-	-	-	-	
33	Construction Water 3-Inch	-	-	-	-	-	-	-	-	-	-	-	
34	Construction Water 4-Inch	-	-	-	-	-	-	-	-	-	-	-	
35	Sales for Resale 5/8 x 3/4-Inch	2	74,921	19,841	-	19,841	23,223	3,363	26,644	6,803	17.05%	34.29%	
36	Sales for Resale 1-Inch	-	-	-	-	-	-	-	-	-	0.00%	0.00%	
37	Sales for Resale 1.5-Inch	-	-	-	-	-	-	-	-	-	0.00%	0.00%	
38	Sales for Resale 2-Inch	-	-	-	-	-	-	-	-	-	0.00%	0.00%	
39	Sales for Resale 3-Inch	-	-	-	-	-	-	-	-	-	0.00%	0.00%	
40	Sales for Resale 4-Inch	-	-	-	-	-	-	-	-	-	0.00%	0.00%	
41	Sales for Resale 6-Inch	-	-	-	-	-	-	-	-	-	0.00%	0.00%	
42	Sales for Resale 8-Inch	-	-	-	-	-	-	-	-	-	0.00%	0.00%	
43	Sales for Resale 10-Inch	-	-	-	-	-	-	-	-	-	0.00%	0.00%	
44	Totals	1,521	6,242	\$ 987,039	\$ (9,438)	\$ 977,602	\$ 1,119,354	\$ 141,752	\$ 1,080,666	\$ 103,064	14.50%	10.54%	

Supporting Schedules:  
 N12011\_Rate\_CaseSchedulesEastern Group2011 AWC Rate Case Model REBUTTAL SCHEDULES AWC EG 03 30 12 900am.xlsxv2  
 Processing Date: 3/30/2012 11:10 AM

SaddleBrooke Ranch										
[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]	[K]
Bill Count Water Revenues										
Line No.	Detail Class of Service	Average Number of Customers	Average Consumption	Test Year Rates	Cust. Growth Adjustment (IS-7)	Adjusted T.Y. Rates (IC + D)	Company - As Filed		Company - Rebuttal	
							Proposed Rates	Increase (F - E)	Proposed Rates	Increase (I - E)
1	Residential 5/8 x 3/4 -inch	57	3,405	\$ 19,780	\$ 6,478	\$ 26,258	\$ 37,218	\$ 10,961	\$ 34,641	\$ 8,363
2	Residential 1-inch	19	5,927	14,215	4,655	18,870	28,500	9,631	26,462	7,593
3	Residential 1.5-inch	-	-	-	-	-	-	-	-	-
4	Residential 2-inch	-	-	-	-	-	-	-	-	-
5	Residential 3-inch	-	-	-	-	-	-	-	-	-
6	Residential 4-inch	-	-	-	-	-	-	-	-	-
7	Residential 6-inch	-	-	-	-	-	-	-	-	-
8	Residential 8-inch	-	-	-	-	-	-	-	-	-
9	Residential 10-inch	-	-	-	-	-	-	-	-	-
10	Commercial 5/8 x 3/4 -inch	4	11,493	2,858	332	3,190	5,046	1,856	5,322	2,132
11	Commercial 1-inch	1	347	584	68	652	998	346	1,375	723
12	Commercial 1.5-inch	-	-	-	-	-	-	-	-	-
13	Commercial 2-inch	5	167,037	47,091	5,476	52,567	91,250	38,684	92,232	39,665
14	Commercial 3-inch	1	96,375	4,361	507	4,868	8,490	3,622	9,528	4,660
15	Commercial 4-inch	-	-	-	-	-	-	-	-	-
16	Commercial 6-inch	-	-	-	-	-	-	-	-	-
17	Commercial 8-inch	-	-	-	-	-	-	-	-	-
18	Commercial 10-inch	-	-	-	-	-	-	-	-	-
19	Industrial 5/8 x 3/4 -inch	-	-	-	-	-	-	-	-	-
20	Industrial 1-inch	-	-	-	-	-	-	-	-	-
21	Industrial 1.5-inch	-	-	-	-	-	-	-	-	-
22	Industrial 2-inch	-	-	-	-	-	-	-	-	-
23	Industrial 3-inch	-	-	-	-	-	-	-	-	-
24	Industrial 4-inch	-	-	-	-	-	-	-	-	-
25	Industrial 6-inch	-	-	-	-	-	-	-	-	-
26	Industrial 8-inch	-	-	-	-	-	-	-	-	-
27	Industrial 10-inch	-	-	-	-	-	-	-	-	-
28	Private Fire Service	1	-	85	-	85	459	374	459	374
29	Other Water Revenues	-	-	-	-	-	-	-	-	-
30	Public Fire Hydrant	-	-	-	-	-	-	-	-	-
31	Coin Machine	-	-	-	-	-	-	-	-	-
32	Construction Water 2-inch	-	-	-	-	-	-	-	-	-
33	Construction Water 3-inch	-	-	-	-	-	-	-	-	-
34	Construction Water 4-inch	-	-	-	-	-	-	-	-	-
35	Sales for Resale 5/8 x 3/4-Inch	0	697,700	9,032	-	9,032	15,970	6,938	15,676	6,644
36	Sales for Resale 1-Inch	-	-	-	-	-	-	-	-	-
37	Sales for Resale 1.5-Inch	-	-	-	-	-	-	-	-	-
38	Sales for Resale 2-Inch	-	-	-	-	-	-	-	-	-
39	Sales for Resale 3-Inch	-	-	-	-	-	-	-	-	-
40	Sales for Resale 4-Inch	-	-	-	-	-	-	-	-	-
41	Sales for Resale 6-Inch	-	-	-	-	-	-	-	-	-
42	Sales for Resale 8-Inch	-	-	-	-	-	-	-	-	-
43	Sales for Resale 10-Inch	-	-	-	-	-	-	-	-	-
44	Totals	89	16,110	\$ 98,005	\$ 17,516	\$ 115,521	\$ 187,932	\$ 72,411	\$ 185,694	\$ 70,173
45								62.68%		60.75%

SaddleBrooke Ranch										
[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]	[K]
Bill Count Water Revenues										
Line No.	Summary Class of Service	Average Number of Customers	Average Consumption	Test Year Rates	Cust. Growth Adjustment (S-Z)	Adjusted T.Y. Rates (C+D)	Company - As Filed		Company - Rebuttal	
							Proposed Rates	Increase [F-E]	Proposed Rates	Increase [I-E]
1										
2	Total Residential	76	4,040	\$ 33,994	\$ 11,133	\$ 45,127	\$ 65,719	\$ 20,591	\$ 61,103	\$ 15,976
3	Total Commercial	11	87,807	54,894	6,383	61,277	105,785	44,508	108,456	47,180
4	Total Industrial	-	-	-	-	-	-	-	-	-
5	Total Private Fire	1	-	85	-	85	459	374	459	374
6	Total Other Water Revenues	0	697,700	9,032	-	9,032	15,970	6,938	15,676	6,644
7										
8	Totals	89	16,110	\$ 98,005	\$ 17,516	\$ 115,521	\$ 187,932	\$ 72,411	\$ 185,694	\$ 70,173
9										
10	Miscellaneous Revenues	-	-	1,582	-	1,582	2,884	1,302	2,884	1,302
11	Total Revenue Generated						\$ 190,816		\$ 188,578	
12										
13	Target Rev. Rqmt. (Sch. C-1)						227,687		244,673	
14	Difference						\$ (36,871)		\$ (56,095)	
15										
16	Less: Consolidated Revenue Adj.									
17	Over/(Short)						\$ (36,871)	(San Manuel/Oracle/	\$ (56,095)	(San Manuel/Oracle/
18	%						\$ 0	SaddleBrooke)	\$ 0	SaddleBrooke)
19							0.00%		0.00%	
20										
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Winkelman										
[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]	[K]
Line No.	Detail Class of Service	Average Number of Customers	Average Consumption	Test Year Rates	Cust. Growth Adjustment		Adjusted T.Y. Rates		Company - As Filed Increase	
					(IS-7)	(IC+D)	Proposed Rates	IF-E	Proposed Rates	Company - Rebuttal Increase (I-E)
1	Residential 5/8 x 3/4 -inch	134	9,398	\$ 51,794	\$ (636)	\$ 51,158	\$ 65,992	\$ 14,834	\$ 66,478	\$ 15,320
2	Residential 1-inch	2	43,175	3,123	(40)	3,083	3,768	685	3,804	721
3	Residential 1.5-inch	-	-	-	-	-	-	-	-	-
4	Residential 2-inch	-	-	-	-	-	-	-	-	-
5	Residential 3-inch	-	-	-	-	-	-	-	-	-
6	Residential 4-inch	-	-	-	-	-	-	-	-	-
7	Residential 6-inch	-	-	-	-	-	-	-	-	-
8	Residential 8-inch	-	-	-	-	-	-	-	-	-
9	Residential 10-inch	-	-	-	-	-	-	-	-	-
10	Commercial 5/8 x 3/4 -inch	14	7,036	4,885	(192)	4,693	6,096	1,404	6,138	1,445
11	Commercial 1-inch	1	14,883	783	(32)	751	985	234	991	240
12	Commercial 1.5-inch	-	-	-	-	-	-	-	-	-
13	Commercial 2-inch	2	34,829	4,360	(183)	4,177	5,406	1,229	5,432	1,255
14	Commercial 3-inch	1	280,442	9,208	(375)	8,833	11,863	3,031	11,977	3,144
15	Commercial 4-inch	2	377,375	25,699	(1,062)	24,637	32,811	8,174	33,108	8,471
16	Commercial 6-inch	-	-	-	-	-	-	-	-	-
17	Commercial 8-inch	-	-	-	-	-	-	-	-	-
18	Commercial 10-inch	-	-	-	-	-	-	-	-	-
19	Industrial 5/8 x 3/4 -inch	-	-	-	-	-	-	-	-	-
20	Industrial 1-inch	-	-	-	-	-	-	-	-	-
21	Industrial 1.5-inch	-	-	-	-	-	-	-	-	-
22	Industrial 2-inch	1	69,092	3,089	-	3,089	3,897	808	3,482	393
23	Industrial 3-inch	-	-	-	-	-	-	-	-	-
24	Industrial 4-inch	-	-	-	-	-	-	-	-	-
25	Industrial 6-inch	-	-	-	-	-	-	-	-	-
26	Industrial 8-inch	-	-	-	-	-	-	-	-	-
27	Industrial 10-inch	-	-	-	-	-	-	-	-	-
28	Private Fire Service	-	-	-	-	-	-	-	-	-
29	Other Water Revenues	-	-	-	-	-	-	-	-	-
30	Public Fire Hydrant	-	-	-	-	-	-	-	-	-
31	Coin Machine	-	-	-	-	-	-	-	-	-
32	Construction Water 2-Inch	-	-	-	-	-	-	-	-	-
33	Construction Water 3-Inch	-	-	-	-	-	-	-	-	-
34	Construction Water 4-Inch	-	-	-	-	-	-	-	-	-
35	Construction Water 6-Inch	-	-	-	-	-	-	-	-	-
36	Sales for Resale 5/8 x 3/4-Inch	-	-	-	-	-	-	-	-	-
37	Sales for Resale 1-Inch	-	-	-	-	-	-	-	-	-
38	Sales for Resale 1.5-Inch	-	-	-	-	-	-	-	-	-
39	Sales for Resale 2-Inch	-	-	-	-	-	-	-	-	-
40	Sales for Resale 3-Inch	-	-	-	-	-	-	-	-	-
41	Sales for Resale 4-Inch	-	-	-	-	-	-	-	-	-
42	Sales for Resale 6-Inch	-	-	-	-	-	-	-	-	-
43	Sales for Resale 8-Inch	-	-	-	-	-	-	-	-	-
44	Sales for Resale 10-Inch	-	-	-	-	-	-	-	-	-
45	Totals	157	16,793	\$ 102,942	\$ (2,521)	\$ 100,421	\$ 130,819	\$ 30,398	\$ 131,410	\$ 30,989
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Bill Count Water Revenues										
Line No.	Average Number of Customers	Average Consumption	Test Year Rates	Cust. Growth Adjustment (IS-7)	Adjusted T.Y. Rates (IC + D)	Proposed Rates	Company - As Filed Increase (F - E)	Proposed Rates	Company - Rebuttal Increase (I - E)	%
1										
2	136	9,895	\$ 54,917	\$ (676)	\$ 54,241	\$ 69,760	\$ 15,519	\$ 70,282	\$ 16,041	29.57%
3	20	61,364	44,936	(1,845)	43,091	57,162	14,071	57,645	14,555	33.78%
4	1	69,092	3,089	-	3,089	3,997	808	3,482	393	12.73%
5	-	-	-	-	-	-	0.00%	-	-	0.00%
6	-	-	-	-	-	-	0.00%	-	-	0.00%
7	-	-	-	-	-	-	0.00%	-	-	0.00%
8	157	16,793	\$ 102,942	\$ (2,521)	\$ 100,421	\$ 130,819	\$ 30,398	\$ 131,410	\$ 30,989	30.86%
9										
10	Miscellaneous Revenues	-	1,669	-	1,669	2,543	874	2,543	874	52.36%
11	Total Revenue Generated					\$ 133,362		\$ 133,953		
12	Target Rev. Rqmt. (Sch. C-1)									
13	Difference					\$ 133,362		\$ 133,953		
14						(0)		0		
15	Less: Consolidated Revenue Adj.									
16	Over/(Short)					-		-		
17	%					(0)		0		
18						\$ 0.00%		\$ 0.00%		
19										
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Line No.		Class of Service	Superstition (Apache Junction, Superior, Miami)																	
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			Rate Block		Present		Proposed - Rebuttal		Present		Basic Service Charge		Proposed		Rate		Rate - Rebuttal		Change	
1	2	Residential 5/8 x 3/4 -inch	Tier One Breakover (M Gal):	3	3															
3	4		Tier Two Breakover (M Gal):	10	10															
5	6		Tier Three Breakover (M Gal):	99,999	99,999															
7	8	Residential 1-inch	Tier One Breakover (M Gal):	10	40															
9	10		Tier Two Breakover (M Gal):	99,999	99,999															
11	12		Tier Three Breakover (M Gal):	99,999	99,999															
13	14	Residential 1.5-inch	Tier One Breakover (M Gal):	n/a	75															
15	16		Tier Two Breakover (M Gal):	n/a	99,999															
17	18		Tier Three Breakover (M Gal):	n/a	99,999															
19	20	Residential 2-inch	Tier One Breakover (M Gal):	125	125															
21	22		Tier Two Breakover (M Gal):	99,999	99,999															
23	24		Tier Three Breakover (M Gal):	99,999	99,999															
25	26	Residential 3-inch	Tier One Breakover (M Gal):	300	300															
27	28		Tier Two Breakover (M Gal):	99,999	99,999															
29	30		Tier Three Breakover (M Gal):	99,999	99,999															
31	32	Residential 4-inch	Tier One Breakover (M Gal):	500	500															
33	34		Tier Two Breakover (M Gal):	99,999	99,999															
35	36		Tier Three Breakover (M Gal):	99,999	99,999															
37	38	Residential 6-inch	Tier One Breakover (M Gal):	1,000	1,000															
39	40		Tier Two Breakover (M Gal):	99,999	99,999															
41	42		Tier Three Breakover (M Gal):	99,999	99,999															
43	44	Residential 8-inch	Tier One Breakover (M Gal):	1,500	1,500															
45	46		Tier Two Breakover (M Gal):	99,999	99,999															
47	48		Tier Three Breakover (M Gal):	99,999	99,999															
49	50	Residential 10-inch	Tier One Breakover (M Gal):	2,225	2,300															
51	52		Tier Two Breakover (M Gal):	99,999	99,999															
53	54		Tier Three Breakover (M Gal):	99,999	99,999															

(Continued)

\*\*For Service Charges See Company-wide Service Charge Tariff at the end of this schedule\*\*

Line No.		Superstition (Apache Junction, Superior, Miami)										[I]							
		[A]		[B]		[C]		[D]		[E]				[F]		[G]		[H]	
		Rate Block		Present		Proposed - Rebuttal		Present		Basic Service Charge				Proposed		Present		Volumetric Charge (M Gal)	
Class of Service																			
1	2	Commercial 5/8 x 3/4 -inch		10	10	99,999	99,999	\$	18.44	\$	23.00	\$	4.56	\$	2,8527	\$	3,6229	\$	0.7702
3	4	Tier One Breakover (M Gal):		99,999	99,999										3,5663		4,5286		0.9623
5	6	Tier Two Breakover (M Gal):		99,999	99,999										3,5663		4,5286		0.9623
7	8	Tier Three Breakover (M Gal):		99,999	99,999										3,5663		4,5286		0.9623
9	10	Commercial 1-inch		30	40	99,999	99,999	\$	46.10	\$	57.50	\$	11.40	\$	2,8527	\$	3,6229		0.7702
11	12	Tier One Breakover (M Gal):		99,999	99,999										3,5663		4,5286		0.9623
13	14	Tier Two Breakover (M Gal):		99,999	99,999										3,5663		4,5286		0.9623
15	16	Tier Three Breakover (M Gal):		99,999	99,999										3,5663		4,5286		0.9623
17	18	Commercial 1.5-inch		n/a	75	n/a	99,999	n/a	\$	115.00		n/a			n/a	\$	3,6229		n/a
19	20	Tier One Breakover (M Gal):		n/a	99,999	n/a	99,999								n/a		4,5286		n/a
21	22	Tier Two Breakover (M Gal):		n/a	99,999	n/a	99,999								n/a		4,5286		n/a
23	24	Tier Three Breakover (M Gal):		n/a	99,999	n/a	99,999								n/a		4,5286		n/a
25	26	Commercial 2-inch		100	125	99,999	99,999	\$	147.52	\$	184.00	\$	36.48	\$	2,8527	\$	3,6229		0.7702
27	28	Tier One Breakover (M Gal):		99,999	99,999										3,5663		4,5286		0.9623
29	30	Tier Two Breakover (M Gal):		99,999	99,999										3,5663		4,5286		0.9623
31	32	Tier Three Breakover (M Gal):		99,999	99,999										3,5663		4,5286		0.9623
33	34	Commercial 3-inch		275	300	99,999	99,999	\$	295.04	\$	368.00	\$	72.96	\$	2,8527	\$	3,6229		0.7702
35	36	Tier One Breakover (M Gal):		99,999	99,999										3,5663		4,5286		0.9623
37	38	Tier Two Breakover (M Gal):		99,999	99,999										3,5663		4,5286		0.9623
39	40	Tier Three Breakover (M Gal):		99,999	99,999										3,5663		4,5286		0.9623
41	42	Commercial 4-inch		450	500	99,999	99,999	\$	461.00	\$	575.00	\$	114.00	\$	2,8527	\$	3,6229		0.7702
43	44	Tier One Breakover (M Gal):		99,999	99,999										3,5663		4,5286		0.9623
45	46	Tier Two Breakover (M Gal):		99,999	99,999										3,5663		4,5286		0.9623
47	48	Tier Three Breakover (M Gal):		99,999	99,999										3,5663		4,5286		0.9623
49	50	Commercial 6-inch		925	1,000	99,999	99,999	\$	922.01	\$	1,150.00	\$	227.99	\$	2,8527	\$	3,6229		0.7702
51	52	Tier One Breakover (M Gal):		99,999	99,999										3,5663		4,5286		0.9623
53	54	Tier Two Breakover (M Gal):		99,999	99,999										3,5663		4,5286		0.9623
55	56	Tier Three Breakover (M Gal):		99,999	99,999										3,5663		4,5286		0.9623
57	58	Commercial 8-inch		1,500	1,500	99,999	99,999	\$	1,475.21	\$	1,840.00	\$	364.79	\$	2,8527	\$	3,6229		0.7702
59	60	Tier One Breakover (M Gal):		99,999	99,999										3,5663		4,5286		0.9623
61	62	Tier Two Breakover (M Gal):		99,999	99,999										3,5663		4,5286		0.9623
63	64	Tier Three Breakover (M Gal):		99,999	99,999										3,5663		4,5286		0.9623
65	66	Commercial 10-inch		2,225	2,300	99,999	99,999	\$	2,120.61	\$	2,645.00	\$	524.39	\$	2,8527	\$	3,6229		0.7702
67	68	Tier One Breakover (M Gal):		99,999	99,999										3,5663		4,5286		0.9623
69	70	Tier Two Breakover (M Gal):		99,999	99,999										3,5663		4,5286		0.9623
71	72	Tier Three Breakover (M Gal):		99,999	99,999										3,5663		4,5286		0.9623

(Continued)

\*\*For Service Charges See Company-wide Service Charge Tariff at the end of this schedule\*\*



Superstition (Apache Junction, Superior, Miami)										
[A]		[B]	[C]	[D]			[E]			[F]
		Rate Block					Basic Service Charge			
		Present	Proposed - Rebuttal	Present Rate	Proposed Rate - Rebuttal	Change	Volumetric Charge (M Gal)			
Line No.	Class of Service						Present Rate	Proposed Rate - Rebuttal	Change	
1										
2	Industrial 5/8 x 3/4 -inch	99,999	99,999	\$ 18.44	\$ 29.00	\$ 10.56	\$ 2,7660	\$ 2,7500	(0.0160)	
3		99,999	99,999				2,7660	2,7500	(0.0160)	
4		99,999	99,999				2,7660	2,7500	(0.0160)	
5										
6	Industrial 1-inch	99,999	99,999	\$ 46.10	\$ 72.50	\$ 26.40	\$ 2,7660	\$ 2,7500	(0.0160)	
7		99,999	99,999				2,7660	2,7500	(0.0160)	
8		99,999	99,999				2,7660	2,7500	(0.0160)	
9										
10	Industrial 1.5-inch	n/a	99,999	n/a	\$ 145.00	n/a	n/a	\$ 2,7500	n/a	n/a
11		99,999	99,999				n/a	2,7500	n/a	n/a
12		n/a	99,999				n/a	2,7500	n/a	n/a
13										
14	Industrial 2-inch	99,999	99,999	\$ 147.52	\$ 232.00	\$ 84.48	\$ 2,7660	\$ 2,7500	(0.0160)	
15		99,999	99,999				2,7660	2,7500	(0.0160)	
16		99,999	99,999				2,7660	2,7500	(0.0160)	
17										
18	Industrial 3-inch	99,999	99,999	\$ 295.04	\$ 464.00	\$ 168.96	\$ 2,7660	\$ 2,7500	(0.0160)	
19		99,999	99,999				2,7660	2,7500	(0.0160)	
20		99,999	99,999				2,7660	2,7500	(0.0160)	
21										
22	Industrial 4-inch	99,999	99,999	\$ 461.00	\$ 725.00	\$ 264.00	\$ 2,7660	\$ 2,7500	(0.0160)	
23		99,999	99,999				2,7660	2,7500	(0.0160)	
24		99,999	99,999				2,7660	2,7500	(0.0160)	
25										
26	Industrial 6-inch	99,999	99,999	\$ 922.01	\$ 1,450.00	\$ 527.99	\$ 2,7660	\$ 2,7500	(0.0160)	
27		99,999	99,999				2,7660	2,7500	(0.0160)	
28		99,999	99,999				2,7660	2,7500	(0.0160)	
29										
30	Industrial 8-inch	99,999	99,999	\$ 1,475.21	\$ 2,320.00	\$ 844.79	\$ 2,7660	\$ 2,7500	(0.0160)	
31		99,999	99,999				2,7660	2,7500	(0.0160)	
32		99,999	99,999				2,7660	2,7500	(0.0160)	
33										
34	Industrial 10-inch	99,999	99,999	\$ 2,120.61	\$ 3,335.00	\$ 1,214.39	\$ 2,7660	\$ 2,7500	(0.0160)	
35		99,999	99,999				2,7660	2,7500	(0.0160)	
36		99,999	99,999				2,7660	2,7500	(0.0160)	
37										
38										
39	Private Fire Service			\$ 26.24	\$ 28.00	\$ 1.76	n/a	n/a	n/a	n/a

(Continued)

\*\*For Service Charges See Company-wide Service Charge Tariff at the end of this schedule\*\*

Line No.	Class of Service	Superstition (Apache Junction, Superior, Miami)					Volumetric Charge (M Gal)				
		Rate Block		Basic Service Charge		[F]	Present		Proposed		[I]
		[A]	[B]	[C]	[D]	[E]	Rate	Rebuttal	Rate	Rebuttal	[H]
1											
2	Public Fire Hydrant										
3											
4	Coin Machine										
5											
6	Construction Water (2-Inch)										
7											
8											
9											
10	Construction Water (3-Inch)										
11											
12											
13											
14	Construction Water (4-Inch)										
15											
16											
17											
18	Sales for Resale (5/8-Inch)										
19											
20											
21											
22	Sales for Resale (1-Inch)										
23											
24											
25											
26	Sales for Resale (1.5-Inch)										
27											
28											
29											
30	Sales for Resale (2-Inch)										
31											
32											
33											
34	Sales for Resale (3-Inch)										
35											
36											
37											
38	Sales for Resale (4-Inch)										
39											
40											
41											
42	Sales for Resale (6-Inch)										
43											
44											
45											
46	Sales for Resale (8-Inch)										
47											
48											
49											
50	Sales for Resale (10-Inch)										
51											
52											
53											
54											
55											

\*\*For Service Charges See Company-wide Service Charge Tariff at the end of this schedule\*\*

Cochise (Bisbee, Sierra Vista)									
Line No.	Class of Service	Rate Block		Basic Service Charge		Volumetric Charge (M Gal)			
		[A]		[D]		[E]		[F]	
		[B]	[C]	Present Rate	Proposed Rate - Rebuttal	Present Rate	Proposed Rate - Rebuttal	Present Rate	Proposed Rate - Rebuttal
1									
2	Residential 5/8 x 3/4 -inch								
3	Tier One Breakover (M Gal):	3	3	\$ 13.36	\$ 20.00	varies	varies	varies	varies
4	Tier Two Breakover (M Gal):	10	10			varies	varies	varies	varies
5	Tier Three Breakover (M Gal):	99,999	99,999			varies	varies	varies	varies
6	Residential 1-inch								
7	Tier One Breakover (M Gal):	10	35	\$ 33.39	\$ 50.00	varies	varies	varies	varies
8	Tier Two Breakover (M Gal):	99,999	99,999			varies	varies	varies	varies
9	Tier Three Breakover (M Gal):	99,999	99,999			varies	varies	varies	varies
10	Residential 1.5-inch								
11	Tier One Breakover (M Gal):	n/a	75	n/a	100.00	n/a	varies	n/a	n/a
12	Tier Two Breakover (M Gal):	n/a	99,999			n/a	varies	n/a	n/a
13	Tier Three Breakover (M Gal):	n/a	99,999			n/a	varies	n/a	n/a
14	Residential 2-inch								
15	Tier One Breakover (M Gal):	74	125	\$ 106.84	\$ 160.00	varies	varies	varies	varies
16	Tier Two Breakover (M Gal):	99,999	99,999			varies	varies	varies	varies
17	Tier Three Breakover (M Gal):	99,999	99,999			varies	varies	varies	varies
18	Residential 3-inch								
19	Tier One Breakover (M Gal):	167	265	\$ 213.68	\$ 320.00	varies	varies	varies	varies
20	Tier Two Breakover (M Gal):	99,999	99,999			varies	varies	varies	varies
21	Tier Three Breakover (M Gal):	99,999	99,999			varies	varies	varies	varies
22	Residential 4-inch								
23	Tier One Breakover (M Gal):	272	420	\$ 333.88	\$ 500.00	varies	varies	varies	varies
24	Tier Two Breakover (M Gal):	99,999	99,999			varies	varies	varies	varies
25	Tier Three Breakover (M Gal):	99,999	99,999			varies	varies	varies	varies
26	Residential 6-inch								
27	Tier One Breakover (M Gal):	567	860	\$ 667.77	\$ 1,000.00	varies	varies	varies	varies
28	Tier Two Breakover (M Gal):	99,999	99,999			varies	varies	varies	varies
29	Tier Three Breakover (M Gal):	99,999	99,999			varies	varies	varies	varies
30	Residential 8-inch								
31	Tier One Breakover (M Gal):	921	1,390	\$ 1,068.42	\$ 1,600.00	varies	varies	varies	varies
32	Tier Two Breakover (M Gal):	99,999	99,999			varies	varies	varies	varies
33	Tier Three Breakover (M Gal):	99,999	99,999			varies	varies	varies	varies
34	Residential 10-inch								
35	Tier One Breakover (M Gal):	1,342	2,000	\$ 1,535.86	\$ 2,300.00	varies	varies	varies	varies
36	Tier Two Breakover (M Gal):	99,999	99,999			varies	varies	varies	varies
37	Tier Three Breakover (M Gal):	99,999	99,999			varies	varies	varies	varies
38									
39									
40									
41									
42									
43									
44									
45									
46									
47									
48									
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55									

(Continued)

\*\*For Service Charges See Company-wide Service Charge Tariff at the end of this schedule\*\*

Cochise (Bisbee, Sierra Vista)										
Line No.	Class of Service	Rate Block		Basic Service Charge		Volumetric Charge (M Gal)				Change
		Present	Proposed - Rebuttal	Present Rate	Proposed Rate - Rebuttal	Present Rate	Proposed Rate - Rebuttal	Present Rate	Proposed Rate - Rebuttal	
1										
2	Commercial 5/8 x 3/4 -inch	10	10	\$ 13.36	\$ 20.00	varies	varies	varies	varies	varies
3	Tier One Breakover (M Gal):	99,999	99,999			varies	varies	varies	varies	varies
4	Tier Two Breakover (M Gal):	99,999	99,999			varies	varies	varies	varies	varies
5	Tier Three Breakover (M Gal):					varies	varies	varies	varies	varies
6	Commercial 1-inch	25	35	\$ 33.39	\$ 50.00	varies	varies	varies	varies	varies
7	Tier One Breakover (M Gal):	99,999	99,999			varies	varies	varies	varies	varies
8	Tier Two Breakover (M Gal):	99,999	99,999			varies	varies	varies	varies	varies
9	Tier Three Breakover (M Gal):					varies	varies	varies	varies	varies
10	Commercial 1.5-inch	n/a	75	n/a	\$ 100.00	n/a	varies	n/a	varies	n/a
11	Tier One Breakover (M Gal):	n/a	99,999			n/a	varies	n/a	varies	n/a
12	Tier Two Breakover (M Gal):	n/a	99,999			n/a	varies	n/a	varies	n/a
13	Tier Three Breakover (M Gal):					n/a	varies	n/a	varies	n/a
14	Commercial 2-inch	85	125	\$ 106.84	\$ 160.00	varies	varies	varies	varies	varies
15	Tier One Breakover (M Gal):	99,999	99,999			varies	varies	varies	varies	varies
16	Tier Two Breakover (M Gal):	99,999	99,999			varies	varies	varies	varies	varies
17	Tier Three Breakover (M Gal):					varies	varies	varies	varies	varies
18	Commercial 3-inch	175	265	\$ 213.68	\$ 320.00	varies	varies	varies	varies	varies
19	Tier One Breakover (M Gal):	99,999	99,999			varies	varies	varies	varies	varies
20	Tier Two Breakover (M Gal):	99,999	99,999			varies	varies	varies	varies	varies
21	Tier Three Breakover (M Gal):					varies	varies	varies	varies	varies
22	Commercial 4-inch	280	420	\$ 333.88	\$ 500.00	varies	varies	varies	varies	varies
23	Tier One Breakover (M Gal):	99,999	99,999			varies	varies	varies	varies	varies
24	Tier Two Breakover (M Gal):	99,999	99,999			varies	varies	varies	varies	varies
25	Tier Three Breakover (M Gal):					varies	varies	varies	varies	varies
26	Commercial 6-inch	575	860	\$ 667.77	\$ 1,000.00	varies	varies	varies	varies	varies
27	Tier One Breakover (M Gal):	99,999	99,999			varies	varies	varies	varies	varies
28	Tier Two Breakover (M Gal):	99,999	99,999			varies	varies	varies	varies	varies
29	Tier Three Breakover (M Gal):					varies	varies	varies	varies	varies
30	Commercial 8-inch	929	1,390	\$ 1,068.42	\$ 1,600.00	varies	varies	varies	varies	varies
31	Tier One Breakover (M Gal):	99,999	99,999			varies	varies	varies	varies	varies
32	Tier Two Breakover (M Gal):	99,999	99,999			varies	varies	varies	varies	varies
33	Tier Three Breakover (M Gal):					varies	varies	varies	varies	varies
34	Commercial 10-inch	1,342	2,000	\$ 1,535.86	\$ 2,300.00	varies	varies	varies	varies	varies
35	Tier One Breakover (M Gal):	99,999	99,999			varies	varies	varies	varies	varies
36	Tier Two Breakover (M Gal):	99,999	99,999			varies	varies	varies	varies	varies
37	Tier Three Breakover (M Gal):					varies	varies	varies	varies	varies

(Continued)

\*\*For Service Charges See Company-wide Service Charge Tariff at the end of this schedule\*\*

Cochise (Bisbee, Sierra Vista)																
Line No.	[A] Class of Service	[B]			[C]	[D]			[E]			[F]	[G]		[H]	[I]
		Rate Block			Proposed - Rebuttal	Present Rate	Basic Service Charge		Present Rate	Proposed		Change	Present Rate	Volumetric Charge (/M Gal)		
		Present	Proposed	Rebuttal			Rate	Rate - Rebuttal		Change	Rate			Rate - Rebuttal	Change	
1	Industrial 5/8 x 3/4 -inch	Tier One Breakover (M Gal):	99,999	99,999	99,999	\$	24.80	\$	29.00	\$	4.20	varies	\$	5,7500	varies	
2		Tier Two Breakover (M Gal):	99,999	99,999	99,999							varies	\$	5,7500	varies	
3		Tier Three Breakover (M Gal):	99,999	99,999	99,999							varies	\$	5,7500	varies	
4																
5	Industrial 1-inch	Tier One Breakover (M Gal):	99,999	99,999	99,999	\$	62.01	\$	72.50	\$	10.49	varies	\$	5,7500	varies	
6		Tier Two Breakover (M Gal):	99,999	99,999	99,999							varies	\$	5,7500	varies	
7		Tier Three Breakover (M Gal):	99,999	99,999	99,999							varies	\$	5,7500	varies	
8																
9	Industrial 1.5-inch	Tier One Breakover (M Gal):	n/a	99,999	99,999	n/a	\$	145.00	n/a			n/a	\$	5,7500	n/a	
10		Tier Two Breakover (M Gal):	n/a	99,999	99,999							n/a	\$	5,7500	n/a	
11		Tier Three Breakover (M Gal):	n/a	99,999	99,999											
12																
13	Industrial 2-inch	Tier One Breakover (M Gal):	99,999	99,999	99,999	\$	198.42	\$	232.00	\$	33.58	varies	\$	5,7500	varies	
14		Tier Two Breakover (M Gal):	99,999	99,999	99,999							varies	\$	5,7500	varies	
15		Tier Three Breakover (M Gal):	99,999	99,999	99,999							varies	\$	5,7500	varies	
16																
17	Industrial 3-inch	Tier One Breakover (M Gal):	99,999	99,999	99,999	\$	396.84	\$	464.00	\$	67.16	varies	\$	5,7500	varies	
18		Tier Two Breakover (M Gal):	99,999	99,999	99,999							varies	\$	5,7500	varies	
19		Tier Three Breakover (M Gal):	99,999	99,999	99,999							varies	\$	5,7500	varies	
20																
21	Industrial 4-inch	Tier One Breakover (M Gal):	99,999	99,999	99,999	\$	620.07	\$	725.00	\$	104.93	varies	\$	5,7500	varies	
22		Tier Two Breakover (M Gal):	99,999	99,999	99,999							varies	\$	5,7500	varies	
23		Tier Three Breakover (M Gal):	99,999	99,999	99,999							varies	\$	5,7500	varies	
24																
25	Industrial 6-inch	Tier One Breakover (M Gal):	99,999	99,999	99,999	\$	1,240.14	\$	1,450.00	\$	209.86	varies	\$	5,7500	varies	
26		Tier Two Breakover (M Gal):	99,999	99,999	99,999							varies	\$	5,7500	varies	
27		Tier Three Breakover (M Gal):	99,999	99,999	99,999							varies	\$	5,7500	varies	
28																
29	Industrial 8-inch	Tier One Breakover (M Gal):	99,999	99,999	99,999	\$	1,984.22	\$	2,320.00	\$	335.78	varies	\$	5,7500	varies	
30		Tier Two Breakover (M Gal):	99,999	99,999	99,999							varies	\$	5,7500	varies	
31		Tier Three Breakover (M Gal):	99,999	99,999	99,999							varies	\$	5,7500	varies	
32																
33	Industrial 10-inch	Tier One Breakover (M Gal):	99,999	99,999	99,999	\$	2,852.31	\$	3,335.00	\$	482.69	varies	\$	5,7500	varies	
34		Tier Two Breakover (M Gal):	99,999	99,999	99,999							varies	\$	5,7500	varies	
35		Tier Three Breakover (M Gal):	99,999	99,999	99,999							varies	\$	5,7500	varies	
36																
37	Private Fire Service					\$	23.85	\$	28.50	\$	4.65	n/a	\$	n/a	n/a	
38		All meter connection sizes:														

(Continued)

\*\*For Service Charges See Company-wide Service Charge Tariff at the end of this schedule\*\*

**ARIZONA WATER COMPANY**

Test Year Ended December 31, 2010  
Changes in Representative Rate Schedules

Cochise (Bisbee, Sierra Vista)																		
Line No.	Class of Service	[A]	[B]			[C]	[D]			[E]			[F]	[G]		[H]		[I]
			Rate Block		Present		Proposed - Rebuttal	Present Rate	Basic Service Charge	Proposed Rate - Rebuttal	Change	Present Rate		Volumetric Charge (M Gal)	Proposed Rate - Rebuttal	Change		
1	Public Fire Hydrant																	
2																		
3																		
4																		
5	Coin Machine	No. Gallons / \$ .25 (quarter)																
6	Construction Water (2-Inch)	Tier One Breakover (M Gal):		85	125													
7		Tier Two Breakover (M Gal):	99,999	99,999														
8		Tier Three Breakover (M Gal):	99,999	99,999														
9																		
10	Construction Water (3-Inch)	Tier One Breakover (M Gal):		175	265													
11		Tier Two Breakover (M Gal):	99,999	99,999														
12		Tier Three Breakover (M Gal):	99,999	99,999														
13																		
14	Construction Water (4-Inch)	Tier One Breakover (M Gal):		280	420													
15		Tier Two Breakover (M Gal):	99,999	99,999														
16		Tier Three Breakover (M Gal):	99,999	99,999														
17																		
18	Sales for Resale (5/8-Inch)	Tier One Breakover (M Gal):		99,999	99,999													
19		Tier Two Breakover (M Gal):	99,999	99,999														
20		Tier Three Breakover (M Gal):	99,999	99,999														
21																		
22	Sales for Resale (1-Inch)	Tier One Breakover (M Gal):		99,999	99,999													
23		Tier Two Breakover (M Gal):	99,999	99,999														
24		Tier Three Breakover (M Gal):	99,999	99,999														
25																		
26	Sales for Resale (1 1/2-Inch)	Tier One Breakover (M Gal):		n/a	99,999													
27		Tier Two Breakover (M Gal):	n/a	99,999														
28		Tier Three Breakover (M Gal):	n/a	99,999														
29																		
30	Sales for Resale (2-Inch)	Tier One Breakover (M Gal):		99,999	99,999													
31		Tier Two Breakover (M Gal):	99,999	99,999														
32		Tier Three Breakover (M Gal):	99,999	99,999														
33																		
34	Sales for Resale (3-Inch)	Tier One Breakover (M Gal):		99,999	99,999													
35		Tier Two Breakover (M Gal):	99,999	99,999														
36		Tier Three Breakover (M Gal):	99,999	99,999														
37																		
38	Sales for Resale (4-Inch)	Tier One Breakover (M Gal):		99,999	99,999													
39		Tier Two Breakover (M Gal):	99,999	99,999														
40		Tier Three Breakover (M Gal):	99,999	99,999														
41																		
42	Sales for Resale (6-Inch)	Tier One Breakover (M Gal):		99,999	99,999													
43		Tier Two Breakover (M Gal):	99,999	99,999														
44		Tier Three Breakover (M Gal):	99,999	99,999														
45																		
46	Sales for Resale (8-Inch)	Tier One Breakover (M Gal):		99,999	99,999													
47		Tier Two Breakover (M Gal):	99,999	99,999														
48		Tier Three Breakover (M Gal):	99,999	99,999														
49																		
50	Sales for Resale (10-Inch)	Tier One Breakover (M Gal):		99,999	99,999													
51		Tier Two Breakover (M Gal):	99,999	99,999														
52		Tier Three Breakover (M Gal):	99,999	99,999														

\*\*For Service Charges See Company-wide Service Charge Tariff at the end of this schedule\*\*

Line No.		Cochise (Bisbee)																				
		[A]		[B]		[C]		[D]		[E]		[F]		[G]		[H]		[I]				
										Basic Service Charge		Volumetric Charge (M Gal)										
										Present	Proposed - Rebuttal	Present	Proposed	Present	Proposed	Present	Proposed	Present	Proposed			
Class of Service																						
1																						
2		Residential 5/8 x 3/4 -inch			3	3			\$	13.36	\$	20.00	\$	6.64		\$	3.6039	\$	3.5410	\$	(0.0629)	
3		Tier One Breakover (M Gal):			10	10											4.5049		4.4262		(0.0787)	
4		Tier Two Breakover (M Gal):			99,999	99,999											5.6312		5.5328		(0.0984)	
5		Tier Three Breakover (M Gal):																				
6																						
7		Residential 1-inch			10	35			\$	33.39	\$	50.00	\$	16.61		\$	4.5049	\$	4.4262	\$	(0.0787)	
8		Tier One Breakover (M Gal):			99,999	99,999											5.6312		5.5328		(0.0984)	
9		Tier Two Breakover (M Gal):			99,999	99,999											5.6312		5.5328		(0.0984)	
10		Tier Three Breakover (M Gal):																				
11																						
12		Residential 1.5-inch			n/a	75			n/a	\$	100.00		n/a			n/a	\$	4.4262		4.4262		n/a
13		Tier One Breakover (M Gal):			n/a	99,999										n/a	\$	5.5328		5.5328		n/a
14		Tier Two Breakover (M Gal):			n/a	99,999										n/a	\$	5.5328		5.5328		n/a
15		Tier Three Breakover (M Gal):																				
16																						
17		Residential 2-inch			74	125			\$	106.84	\$	160.00	\$	53.16		\$	4.5049	\$	4.4262	\$	(0.0787)	
18		Tier One Breakover (M Gal):			99,999	99,999											5.6312		5.5328		(0.0984)	
19		Tier Two Breakover (M Gal):			99,999	99,999											5.6312		5.5328		(0.0984)	
20		Tier Three Breakover (M Gal):			99,999	99,999																
21																						
22		Residential 3-inch			167	265			\$	213.68	\$	320.00	\$	106.32		\$	4.5049	\$	4.4262	\$	(0.0787)	
23		Tier One Breakover (M Gal):			99,999	99,999											5.6312		5.5328		(0.0984)	
24		Tier Two Breakover (M Gal):			99,999	99,999											5.6312		5.5328		(0.0984)	
25		Tier Three Breakover (M Gal):			99,999	99,999																
26																						
27		Residential 4-inch			272	420			\$	333.88	\$	500.00	\$	166.12		\$	4.5049	\$	4.4262	\$	(0.0787)	
28		Tier One Breakover (M Gal):			99,999	99,999											5.6312		5.5328		(0.0984)	
29		Tier Two Breakover (M Gal):			99,999	99,999											5.6312		5.5328		(0.0984)	
30		Tier Three Breakover (M Gal):			99,999	99,999																
31																						
32		Residential 6-inch			567	860			\$	667.77	\$	1,000.00	\$	332.23		\$	4.5049	\$	4.4262	\$	(0.0787)	
33		Tier One Breakover (M Gal):			99,999	99,999											5.6312		5.5328		(0.0984)	
34		Tier Two Breakover (M Gal):			99,999	99,999											5.6312		5.5328		(0.0984)	
35		Tier Three Breakover (M Gal):			99,999	99,999																
36																						
37		Residential 8-inch			921	1,390			\$	1,068.42	\$	1,600.00	\$	531.58		\$	4.5049	\$	4.4262	\$	(0.0787)	
38		Tier One Breakover (M Gal):			99,999	99,999											5.6312		5.5328		(0.0984)	
39		Tier Two Breakover (M Gal):			99,999	99,999											5.6312		5.5328		(0.0984)	
40		Tier Three Breakover (M Gal):			99,999	99,999																
41																						
42		Residential 10-inch			1,342	2,000			\$	1,535.86	\$	2,300.00	\$	764.14		\$	4.5049	\$	4.4262	\$	(0.0787)	
43		Tier One Breakover (M Gal):			99,999	99,999											5.6312		5.5328		(0.0984)	
44		Tier Two Breakover (M Gal):			99,999	99,999											5.6312		5.5328		(0.0984)	
45		Tier Three Breakover (M Gal):			99,999	99,999																
46																						
47																						
48																						
49																						
50																						
51																						
52																						
53																						
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(Continued)

\*\*For Service Charges See Company-wide Service Charge Tariff at the end of this schedule\*\*

Line No.	Class of Service	Rate Block					Cochise (Bisbee)					Volumetric Charge (M Gal)				
		[A]		[B]		[C]	[D]		[E]	[F]	[G]	[H]		[I]		
		Present		Proposed - Rebuttal		Proposed - Rebuttal	Present Rate		Proposed Rate	Change	Present Rate	Rate - Rebuttal		Proposed Rate		Change
1																
2	Commercial 5/8 x 3/4 -inch		10		10											
3	Tier One Breakover (M Gal):		99,999		99,999											
4	Tier Two Breakover (M Gal):		99,999		99,999											
5	Tier Three Breakover (M Gal):		99,999		99,999											
6																
7	Commercial 1-inch		25		35											
8	Tier One Breakover (M Gal):		99,999		99,999											
9	Tier Two Breakover (M Gal):		99,999		99,999											
10	Tier Three Breakover (M Gal):		99,999		99,999											
11																
12	Commercial 1.5-inch		n/a		75											
13	Tier One Breakover (M Gal):		n/a		99,999											
14	Tier Two Breakover (M Gal):		n/a		99,999											
15	Tier Three Breakover (M Gal):		n/a		99,999											
16																
17	Commercial 2-inch		85		125											
18	Tier One Breakover (M Gal):		99,999		99,999											
19	Tier Two Breakover (M Gal):		99,999		99,999											
20	Tier Three Breakover (M Gal):		99,999		99,999											
21																
22	Commercial 3-inch		175		265											
23	Tier One Breakover (M Gal):		99,999		99,999											
24	Tier Two Breakover (M Gal):		99,999		99,999											
25	Tier Three Breakover (M Gal):		99,999		99,999											
26																
27	Commercial 4-inch		280		420											
28	Tier One Breakover (M Gal):		99,999		99,999											
29	Tier Two Breakover (M Gal):		99,999		99,999											
30	Tier Three Breakover (M Gal):		99,999		99,999											
31																
32	Commercial 6-inch		575		860											
33	Tier One Breakover (M Gal):		99,999		99,999											
34	Tier Two Breakover (M Gal):		99,999		99,999											
35	Tier Three Breakover (M Gal):		99,999		99,999											
36																
37	Commercial 8-inch		929		1,390											
38	Tier One Breakover (M Gal):		99,999		99,999											
39	Tier Two Breakover (M Gal):		99,999		99,999											
40	Tier Three Breakover (M Gal):		99,999		99,999											
41																
42	Commercial 10-inch		1,342		2,000											
43	Tier One Breakover (M Gal):		99,999		99,999											
44	Tier Two Breakover (M Gal):		99,999		99,999											
45	Tier Three Breakover (M Gal):		99,999		99,999											
46																
47																
48																
49																
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(Continued)

\*\*For Service Charges See Company-wide Service Charge Tariff at the end of this schedule\*\*



Line No.	Class of Service	Cochise (Bisbee)						[I]		
		[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]
		Rate Block			Basic Service Charge			Volumetric Charge (M Gal)		
		Present	Proposed - Rebuttal		Present Rate	Proposed Rate - Rebuttal	Change	Present Rate	Proposed Rate - Rebuttal	Change
1										
2	Industrial 5/8 x 3/4 -inch	99,999	99,999		\$ 24.80	\$ 29.00	\$ 4.20	\$ 5,631.11	\$ 5,750.00	\$ 0.1189
3	Tier One Breakover (M Gal):	99,999	99,999					5,631.11	5,750.00	0.1189
4	Tier Two Breakover (M Gal):	99,999	99,999					5,631.11	5,750.00	0.1189
5	Tier Three Breakover (M Gal):	99,999	99,999							
6	Industrial 1-inch	99,999	99,999		\$ 62.01	\$ 72.50	\$ 10.49	\$ 5,631.11	\$ 5,750.00	\$ 0.1189
7	Tier One Breakover (M Gal):	99,999	99,999					5,631.11	5,750.00	0.1189
8	Tier Two Breakover (M Gal):	99,999	99,999					5,631.11	5,750.00	0.1189
9	Tier Three Breakover (M Gal):	99,999	99,999							
10	Industrial 1.5-inch	n/a	99,999		n/a	\$ 145.00	n/a	n/a	\$ 5,750.00	n/a
11	Tier One Breakover (M Gal):	n/a	99,999					n/a	\$ 5,750.00	n/a
12	Tier Two Breakover (M Gal):	n/a	99,999					n/a	\$ 5,750.00	n/a
13	Tier Three Breakover (M Gal):	n/a	99,999							
14	Industrial 2-inch	99,999	99,999		\$ 198.42	\$ 232.00	\$ 33.58	\$ 5,631.11	\$ 5,750.00	\$ 0.1189
15	Tier One Breakover (M Gal):	99,999	99,999					5,631.11	5,750.00	0.1189
16	Tier Two Breakover (M Gal):	99,999	99,999					5,631.11	5,750.00	0.1189
17	Tier Three Breakover (M Gal):	99,999	99,999							
18	Industrial 3-inch	99,999	99,999		\$ 396.84	\$ 464.00	\$ 67.16	\$ 5,631.11	\$ 5,750.00	\$ 0.1189
19	Tier One Breakover (M Gal):	99,999	99,999					5,631.11	5,750.00	0.1189
20	Tier Two Breakover (M Gal):	99,999	99,999					5,631.11	5,750.00	0.1189
21	Tier Three Breakover (M Gal):	99,999	99,999							
22	Industrial 4-inch	99,999	99,999		\$ 620.07	\$ 725.00	\$ 104.93	\$ 5,631.11	\$ 5,750.00	\$ 0.1189
23	Tier One Breakover (M Gal):	99,999	99,999					5,631.11	5,750.00	0.1189
24	Tier Two Breakover (M Gal):	99,999	99,999					5,631.11	5,750.00	0.1189
25	Tier Three Breakover (M Gal):	99,999	99,999							
26	Industrial 6-inch	99,999	99,999		\$ 1,240.14	\$ 1,450.00	\$ 209.86	\$ 5,631.11	\$ 5,750.00	\$ 0.1189
27	Tier One Breakover (M Gal):	99,999	99,999					5,631.11	5,750.00	0.1189
28	Tier Two Breakover (M Gal):	99,999	99,999					5,631.11	5,750.00	0.1189
29	Tier Three Breakover (M Gal):	99,999	99,999							
30	Industrial 8-inch	99,999	99,999		\$ 1,984.22	\$ 2,320.00	\$ 335.78	\$ 5,631.11	\$ 5,750.00	\$ 0.1189
31	Tier One Breakover (M Gal):	99,999	99,999					5,631.11	5,750.00	0.1189
32	Tier Two Breakover (M Gal):	99,999	99,999					5,631.11	5,750.00	0.1189
33	Tier Three Breakover (M Gal):	99,999	99,999							
34	Industrial 10-inch	99,999	99,999		\$ 2,852.31	\$ 3,335.00	\$ 482.69	\$ 5,631.11	\$ 5,750.00	\$ 0.1189
35	Tier One Breakover (M Gal):	99,999	99,999					5,631.11	5,750.00	0.1189
36	Tier Two Breakover (M Gal):	99,999	99,999					5,631.11	5,750.00	0.1189
37	Tier Three Breakover (M Gal):	99,999	99,999							
38	Private Fire Service				\$ 23.85	\$ 28.50	\$ 4.65	n/a	n/a	n/a
39	All meter connection sizes:									
40										
41										
42										
43										
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(Continued)

\*\*For Service Charges See Company-wide Service Charge Tariff at the end of this schedule\*\*

Line No.	Class of Service	Cochise (Bisbee)										Volumetric Charge (M Gal)									
		[A]		[B]		[C]		[D]		[E]		[F]		[G]		[H]		[I]			
																				Rate Block	
		Present	Rebuttal	Present	Rate	Rebuttal	Change	Present	Rate	Rebuttal	Change	Present	Rate	Rebuttal	Change	Present	Rate	Rebuttal	Change		
1																					
2	Public Fire Hydrant																				
3																					
4	Coin Machine																				
5																					
6	Construction Water (2-Inch)																				
7	Tier One Breakover (M Gal):			85	125																
8	Tier Two Breakover (M Gal):			99,999	99,999																
9	Tier Three Breakover (M Gal):			99,999	99,999																
10	Construction Water (3-Inch)																				
11	Tier One Breakover (M Gal):			175	265																
12	Tier Two Breakover (M Gal):			99,999	99,999																
13	Tier Three Breakover (M Gal):			99,999	99,999																
14	Construction Water (4-Inch)																				
15	Tier One Breakover (M Gal):			280	420																
16	Tier Two Breakover (M Gal):			99,999	99,999																
17	Tier Three Breakover (M Gal):			99,999	99,999																
18	Sales for Resale (5/8-Inch)																				
19	Tier One Breakover (M Gal):			99,999	99,999																
20	Tier Two Breakover (M Gal):			99,999	99,999																
21	Tier Three Breakover (M Gal):			99,999	99,999																
22	Sales for Resale (1-Inch)																				
23	Tier One Breakover (M Gal):			99,999	99,999																
24	Tier Two Breakover (M Gal):			99,999	99,999																
25	Tier Three Breakover (M Gal):			99,999	99,999																
26	Sales for Resale (1.5-Inch)																				
27	Tier One Breakover (M Gal):			n/a	99,999																
28	Tier Two Breakover (M Gal):			n/a	99,999																
29	Tier Three Breakover (M Gal):			n/a	99,999																
30	Sales for Resale (2-Inch)																				
31	Tier One Breakover (M Gal):			99,999	99,999																
32	Tier Two Breakover (M Gal):			99,999	99,999																
33	Tier Three Breakover (M Gal):			99,999	99,999																
34	Sales for Resale (3-Inch)																				
35	Tier One Breakover (M Gal):			99,999	99,999																
36	Tier Two Breakover (M Gal):			99,999	99,999																
37	Tier Three Breakover (M Gal):			99,999	99,999																
38	Sales for Resale (4-Inch)																				
39	Tier One Breakover (M Gal):			99,999	99,999																
40	Tier Two Breakover (M Gal):			99,999	99,999																
41	Tier Three Breakover (M Gal):			99,999	99,999																
42	Sales for Resale (6-Inch)																				
43	Tier One Breakover (M Gal):			99,999	99,999																
44	Tier Two Breakover (M Gal):			99,999	99,999																
45	Tier Three Breakover (M Gal):			99,999	99,999																
46	Sales for Resale (8-Inch)																				
47	Tier One Breakover (M Gal):			99,999	99,999																
48	Tier Two Breakover (M Gal):			99,999	99,999																
49	Tier Three Breakover (M Gal):			99,999	99,999																
50	Sales for Resale (10-Inch)																				
51	Tier One Breakover (M Gal):			99,999	99,999																
52	Tier Two Breakover (M Gal):			99,999	99,999																
53	Tier Three Breakover (M Gal):			99,999	99,999																
54																					
55																					

\*\*For Service Charges See Company-wide Service Charge Tariff at the end of this schedule\*\*

Cochise (Sierra Vista)																					
Line No.	Class of Service	[A]			[B]		[C]		[D]		[E]				[F]		[G]		[H]		[I]
		Rate Block			Proposed -		Basic Service Charge				Volumetric Charge (M Gal)		Proposed		Present		Rate - Rebuttal				
		Present	Rate	Change	Rate	Rebuttal	Rate	Rebuttal	Rate	Rebuttal	Rate	Rebuttal	Rate	Rebuttal	Rate	Rebuttal	Rate	Rebuttal			
1	Residential 5/8 x 3/4 -inch	Tier One Breakover (M Gal):	3	3	\$	13.36	\$	20.00	\$	6.64	\$	1.3626	\$	1.6600	\$	0.2974					
2		Tier Two Breakover (M Gal):	10	10								1.7032	2.0750	2.5938	2.938	0.3718					
3		Tier Three Breakover (M Gal):	99,999	99,999								2.1290	2.5938	2.938	2.938	0.4648					
4																					
5																					
6	Residential 1-inch	Tier One Breakover (M Gal):	10	35	\$	33.39	\$	50.00	\$	16.61	\$	1.7032	\$	2.0750	\$	0.3718					
7		Tier Two Breakover (M Gal):	99,999	99,999								2.1290	2.5938	2.5938	0.4648						
8		Tier Three Breakover (M Gal):	99,999	99,999								2.1290	2.5938	2.5938	0.4648						
9	Residential 1.5-inch																				
10		Tier One Breakover (M Gal):	n/a	75	n/a	\$	100.00	n/a				n/a	\$	2.0750	n/a	n/a					
11		Tier Two Breakover (M Gal):	n/a	99,999								n/a		2.5938	n/a	n/a					
12		Tier Three Breakover (M Gal):	n/a	99,999								n/a		2.5938	n/a	n/a					
13																					
14	Residential 2-inch	Tier One Breakover (M Gal):	74	125	\$	106.84	\$	160.00	\$	53.16	\$	1.7032	\$	2.0750	\$	0.3718					
15		Tier Two Breakover (M Gal):	99,999	99,999								2.1290	2.5938	2.5938	0.4648						
16		Tier Three Breakover (M Gal):	99,999	99,999								2.1290	2.5938	2.5938	0.4648						
17																					
18	Residential 3-inch	Tier One Breakover (M Gal):	167	265	\$	213.68	\$	320.00	\$	106.32	\$	1.7032	\$	2.0750	\$	0.3718					
19		Tier Two Breakover (M Gal):	99,999	99,999								2.1290	2.5938	2.5938	0.4648						
20		Tier Three Breakover (M Gal):	99,999	99,999								2.1290	2.5938	2.5938	0.4648						
21																					
22	Residential 4-inch	Tier One Breakover (M Gal):	272	420	\$	333.88	\$	500.00	\$	166.12	\$	1.7032	\$	2.0750	\$	0.3718					
23		Tier Two Breakover (M Gal):	99,999	99,999								2.1290	2.5938	2.5938	0.4648						
24		Tier Three Breakover (M Gal):	99,999	99,999								2.1290	2.5938	2.5938	0.4648						
25																					
26	Residential 6-inch	Tier One Breakover (M Gal):	567	860	\$	667.77	\$	1,000.00	\$	332.23	\$	1.7032	\$	2.0750	\$	0.3718					
27		Tier Two Breakover (M Gal):	99,999	99,999								2.1290	2.5938	2.5938	0.4648						
28		Tier Three Breakover (M Gal):	99,999	99,999								2.1290	2.5938	2.5938	0.4648						
29																					
30	Residential 8-inch	Tier One Breakover (M Gal):	921	1,390	\$	1,068.42	\$	1,600.00	\$	531.58	\$	1.7032	\$	2.0750	\$	0.3718					
31		Tier Two Breakover (M Gal):	99,999	99,999								2.1290	2.5938	2.5938	0.4648						
32		Tier Three Breakover (M Gal):	99,999	99,999								2.1290	2.5938	2.5938	0.4648						
33																					
34	Residential 10-inch	Tier One Breakover (M Gal):	1,342	2,000	\$	1,535.86	\$	2,300.00	\$	764.14	\$	1.7032	\$	2.0750	\$	0.3718					
35		Tier Two Breakover (M Gal):	99,999	99,999								2.1290	2.5938	2.5938	0.4648						
36		Tier Three Breakover (M Gal):	99,999	99,999								2.1290	2.5938	2.5938	0.4648						

(Continued)

\*\*For Service Charges See Company-wide Service Charge Tariff at the end of this schedule\*\*

Line No.		Cochise (Sierra Vista)									
		[A]		[B]		[C]		[D]		[E]	
		Rate Block		Present		Proposed - Rebuttal		Basic Service Charge		Volumetric Charge (/M Gal)	
								Present Rate		Proposed Rate - Rebuttal	
								Rate		Rate	
								Change		Change	
1	Class of Service										
2	Commercial 5/8 x 3/4 -inch										
3	Tier One Breakover (M Gal):										
4	Tier Two Breakover (M Gal):										
5	Tier Three Breakover (M Gal):										
6	Commercial 1-inch										
7	Tier One Breakover (M Gal):										
8	Tier Two Breakover (M Gal):										
9	Tier Three Breakover (M Gal):										
10	Commercial 1.5-inch										
11	Tier One Breakover (M Gal):										
12	Tier Two Breakover (M Gal):										
13	Tier Three Breakover (M Gal):										
14	Commercial 2-inch										
15	Tier One Breakover (M Gal):										
16	Tier Two Breakover (M Gal):										
17	Tier Three Breakover (M Gal):										
18	Commercial 3-inch										
19	Tier One Breakover (M Gal):										
20	Tier Two Breakover (M Gal):										
21	Tier Three Breakover (M Gal):										
22	Commercial 4-inch										
23	Tier One Breakover (M Gal):										
24	Tier Two Breakover (M Gal):										
25	Tier Three Breakover (M Gal):										
26	Commercial 6-inch										
27	Tier One Breakover (M Gal):										
28	Tier Two Breakover (M Gal):										
29	Tier Three Breakover (M Gal):										
30	Commercial 8-inch										
31	Tier One Breakover (M Gal):										
32	Tier Two Breakover (M Gal):										
33	Tier Three Breakover (M Gal):										
34	Commercial 10-inch										
35	Tier One Breakover (M Gal):										
36	Tier Two Breakover (M Gal):										
37	Tier Three Breakover (M Gal):										
38											
39											
40											
41											
42											
43											
44											
45											
46											
47											
48											
49											
50											
51											
52											
53											
54											
55											

(Continued)

\*\*For Service Charges See Company-wide Service Charge Tariff at the end of this schedule\*\*

Cochise (Sierra Vista)																			
[A]		[B]		[C]		[D]		[E]		[F]		[G]		[H]		[I]			
Line No.	Class of Service	Rate Block		Present	Proposed - Rebuttal	Present Rate	Basic Service Charge		Present Rate	Proposed Rate - Rebuttal	Change	Present Rate	Volumetric Charge (M Gal)		Present Rate	Proposed Rate - Rebuttal	Change		
1	Industrial 5/8 x 3/4 -inch	Tier One Breakover (M Gal):	99,999	99,999	\$	24.80	\$	29.00	\$	4.20	\$	4.9040	\$	5.7500	\$	0.8460			
2		Tier Two Breakover (M Gal):	99,999	99,999								4.9040	5.7500	0.8460					
3		Tier Three Breakover (M Gal):	99,999	99,999								4.9040	5.7500	0.8460					
4																			
5																			
6	Industrial 1-inch	Tier One Breakover (M Gal):	99,999	99,999	\$	62.01	\$	72.50	\$	10.49	\$	4.9040	\$	5.7500	\$	0.8460			
7		Tier Two Breakover (M Gal):	99,999	99,999								4.9040	5.7500	0.8460					
8		Tier Three Breakover (M Gal):	99,999	99,999								4.9040	5.7500	0.8460					
9	Industrial 1.5-inch																		
10		Tier One Breakover (M Gal):	n/a	99,999	n/a	\$	145.00	n/a				n/a	\$	5.7500	n/a				
11		Tier Two Breakover (M Gal):	n/a	99,999	n/a							n/a	5.7500	n/a					
12		Tier Three Breakover (M Gal):	n/a	99,999								n/a	5.7500	n/a					
13																			
14	Industrial 2-inch	Tier One Breakover (M Gal):	99,999	99,999	\$	198.42	\$	232.00	\$	33.58	\$	4.9040	\$	5.7500	\$	0.8460			
15		Tier Two Breakover (M Gal):	99,999	99,999								4.9040	5.7500	0.8460					
16		Tier Three Breakover (M Gal):	99,999	99,999								4.9040	5.7500	0.8460					
17																			
18	Industrial 3-inch	Tier One Breakover (M Gal):	99,999	99,999	\$	396.84	\$	464.00	\$	67.16	\$	4.9040	\$	5.7500	\$	0.8460			
19		Tier Two Breakover (M Gal):	99,999	99,999								4.9040	5.7500	0.8460					
20		Tier Three Breakover (M Gal):	99,999	99,999								4.9040	5.7500	0.8460					
21																			
22	Industrial 4-inch	Tier One Breakover (M Gal):	99,999	99,999	\$	620.07	\$	725.00	\$	104.93	\$	4.9040	\$	5.7500	\$	0.8460			
23		Tier Two Breakover (M Gal):	99,999	99,999								4.9040	5.7500	0.8460					
24		Tier Three Breakover (M Gal):	99,999	99,999								4.9040	5.7500	0.8460					
25																			
26	Industrial 6-inch	Tier One Breakover (M Gal):	99,999	99,999	\$	1,240.14	\$	1,450.00	\$	209.86	\$	4.9040	\$	5.7500	\$	0.8460			
27		Tier Two Breakover (M Gal):	99,999	99,999								4.9040	5.7500	0.8460					
28		Tier Three Breakover (M Gal):	99,999	99,999								4.9040	5.7500	0.8460					
29																			
30	Industrial 8-inch	Tier One Breakover (M Gal):	99,999	99,999	\$	1,984.22	\$	2,320.00	\$	335.78	\$	4.9040	\$	5.7500	\$	0.8460			
31		Tier Two Breakover (M Gal):	99,999	99,999								4.9040	5.7500	0.8460					
32		Tier Three Breakover (M Gal):	99,999	99,999								4.9040	5.7500	0.8460					
33																			
34	Industrial 10-inch	Tier One Breakover (M Gal):	99,999	99,999	\$	2,852.31	\$	3,335.00	\$	482.69	\$	4.9040	\$	5.7500	\$	0.8460			
35		Tier Two Breakover (M Gal):	99,999	99,999								4.9040	5.7500	0.8460					
36		Tier Three Breakover (M Gal):	99,999	99,999								4.9040	5.7500	0.8460					
37																			
38																			
39	Private Fire Service					\$	23.85	\$	28.50	\$	4.65	n/a	\$	n/a	n/a	n/a			

(Continued)

\*\*For Service Charges See Company-wide Service Charge Tariff at the end of this schedule\*\*

Cochise (Sierra Vista)										
Line No.	Class of Service	Rate Block			Basic Service Charge			Volumetric Charge (M Gal)		
		[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]
1										
2										
3										
4	Public Fire Hydrant									
5	Coin Machine	No. Gallons / \$ .25 (quarter)			n/a	n/a	n/a	n/a	n/a	n/a
6	Construction Water (2-Inch)	Tier One Breakover (M Gal):	85	125						
7		Tier Two Breakover (M Gal):	99,999	99,999						
8		Tier Three Breakover (M Gal):	99,999	99,999						
9										
10	Construction Water (3-Inch)	Tier One Breakover (M Gal):	175	265						
11		Tier Two Breakover (M Gal):	99,999	99,999						
12		Tier Three Breakover (M Gal):	99,999	99,999						
13										
14	Construction Water (4-Inch)	Tier One Breakover (M Gal):	280	420						
15		Tier Two Breakover (M Gal):	99,999	99,999						
16		Tier Three Breakover (M Gal):	99,999	99,999						
17										
18	Sales for Resale (5/8-Inch)	Tier One Breakover (M Gal):	99,999	99,999						
19		Tier Two Breakover (M Gal):	99,999	99,999						
20		Tier Three Breakover (M Gal):	99,999	99,999						
21										
22	Sales for Resale (1-Inch)	Tier One Breakover (M Gal):	99,999	99,999						
23		Tier Two Breakover (M Gal):	99,999	99,999						
24		Tier Three Breakover (M Gal):	99,999	99,999						
25										
26	Sales for Resale (1.5-Inch)	Tier One Breakover (M Gal):	n/a	99,999						
27		Tier Two Breakover (M Gal):	n/a	99,999						
28		Tier Three Breakover (M Gal):	n/a	99,999						
29										
30	Sales for Resale (2-Inch)	Tier One Breakover (M Gal):	99,999	99,999						
31		Tier Two Breakover (M Gal):	99,999	99,999						
32		Tier Three Breakover (M Gal):	99,999	99,999						
33										
34	Sales for Resale (3-Inch)	Tier One Breakover (M Gal):	99,999	99,999						
35		Tier Two Breakover (M Gal):	99,999	99,999						
36		Tier Three Breakover (M Gal):	99,999	99,999						
37										
38	Sales for Resale (4-Inch)	Tier One Breakover (M Gal):	99,999	99,999						
39		Tier Two Breakover (M Gal):	99,999	99,999						
40		Tier Three Breakover (M Gal):	99,999	99,999						
41										
42	Sales for Resale (6-Inch)	Tier One Breakover (M Gal):	99,999	99,999						
43		Tier Two Breakover (M Gal):	99,999	99,999						
44		Tier Three Breakover (M Gal):	99,999	99,999						
45										
46	Sales for Resale (8-Inch)	Tier One Breakover (M Gal):	99,999	99,999						
47		Tier Two Breakover (M Gal):	99,999	99,999						
48		Tier Three Breakover (M Gal):	99,999	99,999						
49										
50	Sales for Resale (10-Inch)	Tier One Breakover (M Gal):	99,999	99,999						
51		Tier Two Breakover (M Gal):	99,999	99,999						
52		Tier Three Breakover (M Gal):	99,999	99,999						
53										

\*\*For Service Charges See Company-wide Service Charge Tariff at the end of this schedule\*\*

San Manuel										
Line No.	Class of Service	Rate Block			Basic Service Charge			Volumetric Charge		
		Present	Proposed - Rebuttal	Change	Present Rate	Proposed Rate - Rebuttal	Change	Present Rate	Proposed Rate - Rebuttal	Change
1										
2	Residential 5/8 x 3/4 -inch	3	3		\$ 21.52	\$ 21.00	\$ (0.52)	\$ 2,7022	\$ 4,6110	\$ 1,9088
3	Tier One Breakover (M Gal):	10	10					3,3775	5,7638	2,3863
4	Tier Two Breakover (M Gal):	99,999	99,999					4,2221	7,2047	2,9826
5	Tier Three Breakover (M Gal):									
6	Residential 1-inch	10	30		\$ 53.80	\$ 52.50	\$ (1.30)	\$ 3,3775	\$ 5,7638	\$ 2,3863
7	Tier One Breakover (M Gal):	99,999	99,999					4,2221	7,2047	2,9826
8	Tier Two Breakover (M Gal):	99,999	99,999					4,2221	7,2047	2,9826
9	Tier Three Breakover (M Gal):									
10	Residential 1.5-inch	n/a	65		n/a	\$ 105.00	n/a	n/a	\$ 5,7638	n/a
11	Tier One Breakover (M Gal):	n/a	99,999					n/a	7,2047	n/a
12	Tier Two Breakover (M Gal):	n/a	99,999					n/a	7,2047	n/a
13	Tier Three Breakover (M Gal):									
14	Residential 2-inch	125	100		\$ 172.18	\$ 168.00	\$ (4.18)	\$ 3,3775	\$ 5,7638	\$ 2,3863
15	Tier One Breakover (M Gal):	99,999	99,999					4,2221	7,2047	2,9826
16	Tier Two Breakover (M Gal):	99,999	99,999					4,2221	7,2047	2,9826
17	Tier Three Breakover (M Gal):									
18	Residential 3-inch	325	220		\$ 344.35	\$ 336.00	\$ (8.35)	\$ 3,3775	\$ 5,7638	\$ 2,3863
19	Tier One Breakover (M Gal):	99,999	99,999					4,2221	7,2047	2,9826
20	Tier Two Breakover (M Gal):	99,999	99,999					4,2221	7,2047	2,9826
21	Tier Three Breakover (M Gal):									
22	Residential 4-inch	500	350		\$ 538.05	\$ 525.00	\$ (13.05)	\$ 3,3775	\$ 5,7638	\$ 2,3863
23	Tier One Breakover (M Gal):	99,999	99,999					4,2221	7,2047	2,9826
24	Tier Two Breakover (M Gal):	99,999	99,999					4,2221	7,2047	2,9826
25	Tier Three Breakover (M Gal):									
26	Residential 6-inch	925	725		\$ 1,076.10	\$ 1,050.00	\$ (26.10)	\$ 3,3775	\$ 5,7638	\$ 2,3863
27	Tier One Breakover (M Gal):	99,999	99,999					4,2221	7,2047	2,9826
28	Tier Two Breakover (M Gal):	99,999	99,999					4,2221	7,2047	2,9826
29	Tier Three Breakover (M Gal):									
30	Residential 8-inch	1,500	1,175		\$ 1,721.76	\$ 1,680.00	\$ (41.76)	\$ 3,3775	\$ 5,7638	\$ 2,3863
31	Tier One Breakover (M Gal):	99,999	99,999					4,2221	7,2047	2,9826
32	Tier Two Breakover (M Gal):	99,999	99,999					4,2221	7,2047	2,9826
33	Tier Three Breakover (M Gal):									
34	Residential 10-inch	2,390	1,700		\$ 2,475.03	\$ 2,415.00	\$ (60.03)	\$ 3,3775	\$ 5,7638	\$ 2,3863
35	Tier One Breakover (M Gal):	99,999	99,999					4,2221	7,2047	2,9826
36	Tier Two Breakover (M Gal):	99,999	99,999					4,2221	7,2047	2,9826
37	Tier Three Breakover (M Gal):									
38										
39										
40										
41										
42										
43										
44										
45										
46										
47										
48										
49										
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55										

(Continued)

\*\*For Service Charges See Company-wide Service Charge Tariff at the end of this schedule\*\*

San Manuel																							
Line No.	Class of Service	Rate Block			[C]			[D]			[E]			[F]			[G]			[H]			[I]
		[A]	[B]	[C]	Basic Service Charge			Volumetric Charge															
					Present	Proposed	Rebuttal	Present	Proposed	Rebuttal	Present	Proposed	Rebuttal	Present	Proposed	Rebuttal	Present	Proposed	Rebuttal				
1																							
2																							
3	Commercial 5/8 x 3/4 -inch	Tier One Breakover (M Gal):	10	10																			
4		Tier Two Breakover (M Gal):	99,999	99,999																			
5		Tier Three Breakover (M Gal):	99,999	99,999																			
6																							
7	Commercial 1-inch	Tier One Breakover (M Gal):	40	30																			
8		Tier Two Breakover (M Gal):	99,999	99,999																			
9		Tier Three Breakover (M Gal):	99,999	99,999																			
10																							
11	Commercial 1.5-inch	Tier One Breakover (M Gal):	n/a	65																			
12		Tier Two Breakover (M Gal):	n/a	99,999																			
13		Tier Three Breakover (M Gal):	n/a	99,999																			
14																							
15	Commercial 2-inch	Tier One Breakover (M Gal):	125	100																			
16		Tier Two Breakover (M Gal):	99,999	99,999																			
17		Tier Three Breakover (M Gal):	99,999	99,999																			
18																							
19	Commercial 3-inch	Tier One Breakover (M Gal):	325	220																			
20		Tier Two Breakover (M Gal):	99,999	99,999																			
21		Tier Three Breakover (M Gal):	99,999	99,999																			
22																							
23	Commercial 4-inch	Tier One Breakover (M Gal):	500	350																			
24		Tier Two Breakover (M Gal):	99,999	99,999																			
25		Tier Three Breakover (M Gal):	99,999	99,999																			
26																							
27	Commercial 6-inch	Tier One Breakover (M Gal):	925	725																			
28		Tier Two Breakover (M Gal):	99,999	99,999																			
29		Tier Three Breakover (M Gal):	99,999	99,999																			
30																							
31	Commercial 8-inch	Tier One Breakover (M Gal):	1,500	1,175																			
32		Tier Two Breakover (M Gal):	99,999	99,999																			
33		Tier Three Breakover (M Gal):	99,999	99,999																			
34																							
35	Commercial 10-inch	Tier One Breakover (M Gal):	2,390	1,700																			
36		Tier Two Breakover (M Gal):	99,999	99,999																			
		Tier Three Breakover (M Gal):	99,999	99,999																			

(Continued)

\*\*For Service Charges See Company-wide Service Charge Tariff at the end of this schedule\*\*



San Manuel									
Line No.	Class of Service	Rate Block		Basic Service Charge		Volumetric Charge			
		Present	Proposed - Rebuttal	Present Rate	Proposed Rate - Rebuttal	Present Rate	Proposed Rate - Rebuttal	Change	
1									
2	Industrial 5/8 x 3/4 -inch	99,999	99,999	\$ 21.52	\$ 32.05	\$ 3,3775	\$ 2,0000	\$ (1,3775)	
3	Tier One Breakover (M Gal):	99,999	99,999			3,3775	2,0000	(1,3775)	
4	Tier Two Breakover (M Gal):	99,999	99,999			3,3775	2,0000	(1,3775)	
5	Tier Three Breakover (M Gal):	99,999	99,999			3,3775	2,0000	(1,3775)	
6	Industrial 1-inch	99,999	99,999	\$ 53.80	\$ 80.12	\$ 3,3775	\$ 2,0000	\$ (1,3775)	
7	Tier One Breakover (M Gal):	99,999	99,999			3,3775	2,0000	(1,3775)	
8	Tier Two Breakover (M Gal):	99,999	99,999			3,3775	2,0000	(1,3775)	
9	Tier Three Breakover (M Gal):	99,999	99,999			3,3775	2,0000	(1,3775)	
10	Industrial 1.5-inch	n/a	99,999	n/a	\$ 160.24	n/a	\$ 2,0000	n/a	
11	Tier One Breakover (M Gal):	n/a	99,999			n/a	2,0000	n/a	
12	Tier Two Breakover (M Gal):	n/a	99,999			n/a	2,0000	n/a	
13	Tier Three Breakover (M Gal):	n/a	99,999			n/a	2,0000	n/a	
14	Industrial 2-inch	99,999	99,999	\$ 172.18	\$ 256.39	\$ 3,3775	\$ 2,0000	\$ (1,3775)	
15	Tier One Breakover (M Gal):	99,999	99,999			3,3775	2,0000	(1,3775)	
16	Tier Two Breakover (M Gal):	99,999	99,999			3,3775	2,0000	(1,3775)	
17	Tier Three Breakover (M Gal):	99,999	99,999			3,3775	2,0000	(1,3775)	
18	Industrial 3-inch	99,999	99,999	\$ 344.35	\$ 512.77	\$ 3,3775	\$ 2,0000	\$ (1,3775)	
19	Tier One Breakover (M Gal):	99,999	99,999			3,3775	2,0000	(1,3775)	
20	Tier Two Breakover (M Gal):	99,999	99,999			3,3775	2,0000	(1,3775)	
21	Tier Three Breakover (M Gal):	99,999	99,999			3,3775	2,0000	(1,3775)	
22	Industrial 4-inch	99,999	99,999	\$ 538.05	\$ 801.21	\$ 3,3775	\$ 2,0000	\$ (1,3775)	
23	Tier One Breakover (M Gal):	99,999	99,999			3,3775	2,0000	(1,3775)	
24	Tier Two Breakover (M Gal):	99,999	99,999			3,3775	2,0000	(1,3775)	
25	Tier Three Breakover (M Gal):	99,999	99,999			3,3775	2,0000	(1,3775)	
26	Industrial 6-inch	99,999	99,999	\$ 1,076.10	\$ 1,602.42	\$ 3,3775	\$ 2,0000	\$ (1,3775)	
27	Tier One Breakover (M Gal):	99,999	99,999			3,3775	2,0000	(1,3775)	
28	Tier Two Breakover (M Gal):	99,999	99,999			3,3775	2,0000	(1,3775)	
29	Tier Three Breakover (M Gal):	99,999	99,999			3,3775	2,0000	(1,3775)	
30	Industrial 8-inch	99,999	99,999	\$ 1,721.76	\$ 2,563.86	\$ 3,3775	\$ 2,0000	\$ (1,3775)	
31	Tier One Breakover (M Gal):	99,999	99,999			3,3775	2,0000	(1,3775)	
32	Tier Two Breakover (M Gal):	99,999	99,999			3,3775	2,0000	(1,3775)	
33	Tier Three Breakover (M Gal):	99,999	99,999			3,3775	2,0000	(1,3775)	
34	Industrial 10-inch	99,999	99,999	\$ 2,475.03	\$ 3,685.55	\$ 3,3775	\$ 2,0000	\$ (1,3775)	
35	Tier One Breakover (M Gal):	99,999	99,999			3,3775	2,0000	(1,3775)	
36	Tier Two Breakover (M Gal):	99,999	99,999			3,3775	2,0000	(1,3775)	
37	Tier Three Breakover (M Gal):	99,999	99,999			3,3775	2,0000	(1,3775)	
38									
39	Private Fire Service			\$ 23.91	\$ 27.00	n/a	n/a	n/a	
40	All meter connection sizes:								
41									
42									
43									
44									
45									
46									
47									
48									
49									
50									
51									
52									
53									
54									
55									

(Continued)

\*\*For Service Charges See Company-wide Service Charge Tariff at the end of this schedule\*\*

San Manuel									
[A]		[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]
Class of Service		Rate Block		Basic Service Charge		Volumetric Charge			
Line No.		Present	Proposed - Rebuttal	Present Rate	Proposed Rate - Rebuttal	Change	Present Rate	Proposed Rate - Rebuttal	Change
1									
2	Public Fire Hydrant			n/a	n/a	n/a	n/a	n/a	n/a
3									
4	Coin Machine			n/a	n/a	n/a	n/a	n/a	n/a
5									
6	Construction Water (2-Inch)	125	100	\$ 172.18	\$ 256.39	\$ 84.21	\$ 3.3894	\$ 5.7500	\$ 2.3606
7	Tier One Breakover (M Gal):	99,999	99,999				4.2370	7.1875	2.9505
8	Tier Two Breakover (M Gal):	99,999	99,999				4.2370	7.1875	2.9505
9	Tier Three Breakover (M Gal):								
10	Construction Water (3-Inch)	325	220	\$ 344.35	\$ 512.77	\$ 168.42	\$ 3.3894	\$ 5.7500	\$ 2.3606
11	Tier One Breakover (M Gal):	99,999	99,999				4.2370	7.1875	2.9505
12	Tier Two Breakover (M Gal):	99,999	99,999				4.2370	7.1875	2.9505
13	Tier Three Breakover (M Gal):								
14	Construction Water (4-Inch)	500	350	\$ 538.05	\$ 801.21	\$ 263.16	\$ 3.3894	\$ 5.7500	\$ 2.3606
15	Tier One Breakover (M Gal):	99,999	99,999				4.2370	7.1875	2.9505
16	Tier Two Breakover (M Gal):	99,999	99,999				4.2370	7.1875	2.9505
17	Tier Three Breakover (M Gal):								
18	Sales for Resale (5/8-Inch)	99,999	99,999	\$ 21.52	\$ 32.05	\$ 10.53	\$ 3.3775	\$ 5.7500	\$ 2.3725
19	Tier One Breakover (M Gal):	99,999	99,999				3.3775	5.7500	2.3725
20	Tier Two Breakover (M Gal):	99,999	99,999				3.3775	5.7500	2.3725
21	Tier Three Breakover (M Gal):								
22	Sales for Resale (1-Inch)	99,999	99,999	\$ 53.80	\$ 80.12	\$ 26.32	\$ 3.3775	\$ 5.7500	\$ 2.3725
23	Tier One Breakover (M Gal):	99,999	99,999				3.3775	5.7500	2.3725
24	Tier Two Breakover (M Gal):	99,999	99,999				3.3775	5.7500	2.3725
25	Tier Three Breakover (M Gal):								
26	Sales for Resale (1.5-Inch)	n/a	n/a	n/a	160.24	n/a	n/a	\$ 5.7500	n/a
27	Tier One Breakover (M Gal):	n/a	n/a				n/a	5.7500	n/a
28	Tier Two Breakover (M Gal):	n/a	n/a				n/a	5.7500	n/a
29	Tier Three Breakover (M Gal):								
30	Sales for Resale (2-Inch)	99,999	99,999	\$ 172.18	\$ 256.39	\$ 84.21	\$ 3.3775	\$ 5.7500	\$ 2.3725
31	Tier One Breakover (M Gal):	99,999	99,999				3.3775	5.7500	2.3725
32	Tier Two Breakover (M Gal):	99,999	99,999				3.3775	5.7500	2.3725
33	Tier Three Breakover (M Gal):								
34	Sales for Resale (3-Inch)	99,999	99,999	\$ 344.35	\$ 512.77	\$ 168.42	\$ 3.3775	\$ 5.7500	\$ 2.3725
35	Tier One Breakover (M Gal):	99,999	99,999				3.3775	5.7500	2.3725
36	Tier Two Breakover (M Gal):	99,999	99,999				3.3775	5.7500	2.3725
37	Tier Three Breakover (M Gal):								
38	Sales for Resale (4-Inch)	99,999	99,999	\$ 538.05	\$ 801.21	\$ 263.16	\$ 3.3775	\$ 5.7500	\$ 2.3725
39	Tier One Breakover (M Gal):	99,999	99,999				3.3775	5.7500	2.3725
40	Tier Two Breakover (M Gal):	99,999	99,999				3.3775	5.7500	2.3725
41	Tier Three Breakover (M Gal):								
42	Sales for Resale (6-Inch)	99,999	99,999	\$ 1,076.10	\$ 1,602.42	\$ 526.32	\$ 3.3775	\$ 5.7500	\$ 2.3725
43	Tier One Breakover (M Gal):	99,999	99,999				3.3775	5.7500	2.3725
44	Tier Two Breakover (M Gal):	99,999	99,999				3.3775	5.7500	2.3725
45	Tier Three Breakover (M Gal):								
46	Sales for Resale (8-Inch)	99,999	99,999	\$ 1,721.76	\$ 2,563.86	\$ 842.10	\$ 3.3775	\$ 5.7500	\$ 2.3725
47	Tier One Breakover (M Gal):	99,999	99,999				3.3775	5.7500	2.3725
48	Tier Two Breakover (M Gal):	99,999	99,999				3.3775	5.7500	2.3725
49	Tier Three Breakover (M Gal):								
50	Sales for Resale (10-Inch)	99,999	99,999	\$ 2,475.03	\$ 3,685.55	\$ 1,210.52	\$ 3.3775	\$ 5.7500	\$ 2.3725
51	Tier One Breakover (M Gal):	99,999	99,999				3.3775	5.7500	2.3725
52	Tier Two Breakover (M Gal):	99,999	99,999				3.3775	5.7500	2.3725
53	Tier Three Breakover (M Gal):								
54									
55									

\*\*For Service Charges See Company-wide Service Charge Tariff at the end of this schedule\*\*

Line No.	Class of Service	Oracle									
		[A]		[B]		[C]		[D]		[E]	
		Rate Block		Present		Proposed - Rebuttal		Basic Service Charge		Volumetric Charge (M Gal)	
								Present Rate	Proposed Rate - Rebuttal	Present Rate	Proposed Rate - Rebuttal
1											
2	Residential 5/8 x 3/4 -inch			3	3			\$ 19.83	\$ 21.00	\$ 4.0922	\$ 4.6110
3	Tier One Breakover (M Gal):			10	10						\$ 0.5188
4	Tier Two Breakover (M Gal):			99,999	99,999					5.1151	5.7638
5	Tier Three Breakover (M Gal):									6.3938	7.2047
6											0.8109
7	Residential 1-inch			10	30			\$ 49.58	\$ 52.50	\$ 5.1151	\$ 5.7638
8	Tier One Breakover (M Gal):			99,999	99,999					6.3938	7.2047
9	Tier Two Breakover (M Gal):			99,999	99,999					6.3938	7.2047
10	Tier Three Breakover (M Gal):										0.8109
11	Residential 1.5-inch			n/a	65			n/a	\$ 105.00	n/a	\$ 5.7638
12	Tier One Breakover (M Gal):			n/a	99,999					n/a	n/a
13	Tier Two Breakover (M Gal):			n/a	99,999					n/a	n/a
14	Tier Three Breakover (M Gal):										0.8109
15	Residential 2-inch			90	100			\$ 158.67	\$ 168.00	\$ 5.1151	\$ 5.7638
16	Tier One Breakover (M Gal):			99,999	99,999					6.3938	7.2047
17	Tier Two Breakover (M Gal):			99,999	99,999					6.3938	7.2047
18	Tier Three Breakover (M Gal):										0.8109
19	Residential 3-inch			200	220			\$ 317.33	\$ 336.00	\$ 5.1151	\$ 5.7638
20	Tier One Breakover (M Gal):			99,999	99,999					6.3938	7.2047
21	Tier Two Breakover (M Gal):			99,999	99,999					6.3938	7.2047
22	Tier Three Breakover (M Gal):										0.8109
23	Residential 4-inch			325	350			\$ 495.83	\$ 525.00	\$ 5.1151	\$ 5.7638
24	Tier One Breakover (M Gal):			99,999	99,999					6.3938	7.2047
25	Tier Two Breakover (M Gal):			99,999	99,999					6.3938	7.2047
26	Tier Three Breakover (M Gal):										0.8109
27	Residential 5-inch			675	725			\$ 991.66	\$ 1,050.00	\$ 5.1151	\$ 5.7638
28	Tier One Breakover (M Gal):			99,999	99,999					6.3938	7.2047
29	Tier Two Breakover (M Gal):			99,999	99,999					6.3938	7.2047
30	Tier Three Breakover (M Gal):										0.8109
31	Residential 8-inch			1,000	1,175			\$ 1,586.65	\$ 1,680.00	\$ 5.1151	\$ 5.7638
32	Tier One Breakover (M Gal):			99,999	99,999					6.3938	7.2047
33	Tier Two Breakover (M Gal):			99,999	99,999					6.3938	7.2047
34	Tier Three Breakover (M Gal):										0.8109
35	Residential 10-inch			1,541	1,700			\$ 2,280.81	\$ 2,415.00	\$ 5.1151	\$ 5.7638
36	Tier One Breakover (M Gal):			99,999	99,999					6.3938	7.2047
37	Tier Two Breakover (M Gal):			99,999	99,999					6.3938	7.2047
38	Tier Three Breakover (M Gal):										0.8109

(Continued)

\*\*For Service Charges See Company-wide Service Charge Tariff at the end of this schedule\*\*

Line No.		Class of Service	Oracle																																		
			[A]				[B]		[C]		[D]		[E]				[F]		[G]		[H]		[I]														
			Rate Block				Present		Proposed - Rebuttal		Present Rate		Basic Service Charge		Proposed Rate - Rebuttal		Present Rate		Volumetric Charge (M Gal)		Proposed Rate - Rebuttal																
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36		
Commercial 5/8 x 3/4 -inch			Tier One Breakover (M Gal):	10	99,999	99,999	10	99,999	\$	19.83	\$	32.05	\$	12.22	\$	5,1151	\$	5,7500	\$	0.6349	\$	0.7937	\$	0.7937	\$	0.7937	\$	0.7937	\$	0.7937	\$	0.7937	\$	0.7937	\$	0.7937	
			Tier Two Breakover (M Gal):	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999
			Tier Three Breakover (M Gal):	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999
Commercial 1-inch			Tier One Breakover (M Gal):	30	99,999	99,999	30	99,999	\$	49.58	\$	80.12	\$	30.54	\$	5,1151	\$	5,7500	\$	0.6349	\$	0.7937	\$	0.7937	\$	0.7937	\$	0.7937	\$	0.7937	\$	0.7937	\$	0.7937	\$	0.7937	
			Tier Two Breakover (M Gal):	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	
			Tier Three Breakover (M Gal):	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999
Commercial 1.5-inch			Tier One Breakover (M Gal):	n/a	n/a	65	99,999	n/a	n/a	\$	160.24	n/a	n/a	n/a	n/a	n/a	n/a	\$	5,7500	\$	n/a	\$	n/a	\$	n/a	\$	n/a	\$	n/a	\$	n/a	\$	n/a	\$	n/a	\$	n/a
			Tier Two Breakover (M Gal):	n/a	n/a	99,999	99,999	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
			Tier Three Breakover (M Gal):	n/a	n/a	99,999	99,999	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Commercial 2-inch			Tier One Breakover (M Gal):	90	99,999	99,999	100	99,999	\$	158.67	\$	256.39	\$	97.72	\$	5,1151	\$	5,7500	\$	0.6349	\$	0.7937	\$	0.7937	\$	0.7937	\$	0.7937	\$	0.7937	\$	0.7937	\$	0.7937	\$	0.7937	
			Tier Two Breakover (M Gal):	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999
			Tier Three Breakover (M Gal):	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999
Commercial 3-inch			Tier One Breakover (M Gal):	210	99,999	220	99,999	\$	317.33	\$	512.77	\$	195.44	\$	5,1151	\$	5,7500	\$	0.6349	\$	0.7937	\$	0.7937	\$	0.7937	\$	0.7937	\$	0.7937	\$	0.7937	\$	0.7937	\$	0.7937	\$	0.7937
			Tier Two Breakover (M Gal):	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999
			Tier Three Breakover (M Gal):	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999
Commercial 4-inch			Tier One Breakover (M Gal):	340	99,999	350	99,999	\$	495.83	\$	801.21	\$	305.38	\$	5,1151	\$	5,7500	\$	0.6349	\$	0.7937	\$	0.7937	\$	0.7937	\$	0.7937	\$	0.7937	\$	0.7937	\$	0.7937	\$	0.7937	\$	0.7937
			Tier Two Breakover (M Gal):	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999
			Tier Three Breakover (M Gal):	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999
Commercial 6-inch			Tier One Breakover (M Gal):	725	99,999	725	99,999	\$	991.66	\$	1,602.42	\$	610.76	\$	5,1151	\$	5,7500	\$	0.6349	\$	0.7937	\$	0.7937	\$	0.7937	\$	0.7937	\$	0.7937	\$	0.7937	\$	0.7937	\$	0.7937	\$	0.7937
			Tier Two Breakover (M Gal):	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999
			Tier Three Breakover (M Gal):	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999
Commercial 8-inch			Tier One Breakover (M Gal):	1,000	99,999	1,175	99,999	\$	1,586.65	\$	2,563.86	\$	977.21	\$	5,1151	\$	5,7500	\$	0.6349	\$	0.7937	\$	0.7937	\$	0.7937	\$	0.7937	\$	0.7937	\$	0.7937	\$	0.7937	\$	0.7937	\$	0.7937
			Tier Two Breakover (M Gal):	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999
			Tier Three Breakover (M Gal):	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999
Commercial 10-inch			Tier One Breakover (M Gal):	1,541	99,999	1,700	99,999	\$	2,280.81	\$	3,685.55	\$	1,404.74	\$	5,1151	\$	5,7500	\$	0.6349	\$	0.7937	\$	0.7937	\$	0.7937	\$	0.7937	\$	0.7937	\$	0.7937	\$	0.7937	\$	0.7937	\$	0.7937
			Tier Two Breakover (M Gal):	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999
			Tier Three Breakover (M Gal):	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999	99,999

(Continued)

\*\*For Service Charges See Company-wide Service Charge Tariff at the end of this schedule\*\*

Line No.	Class of Service	Oracle						Volumetric Charge (M Gal)			
		Rate Block		Basic Service Charge		Volumetric Charge (M Gal)		Present		Proposed	
		[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]
			Present	Proposed - Rebuttal	Present Rate	Rate - Rebuttal	Change	Present Rate	Rate - Rebuttal	Change	
1											
2	Industrial 5/8 x 3/4 -inch		99,999	99,999	\$ 19.83	\$ 32.05	\$ 12.22	\$ 5,1151	\$ 2,0000	\$ (3,1151)	
3	Tier One Breakover (M Gal):		99,999	99,999				5,1151	2,0000	(3,1151)	
4	Tier Two Breakover (M Gal):		99,999	99,999				5,1151	2,0000	(3,1151)	
5	Tier Three Breakover (M Gal):		99,999	99,999							
6	Industrial 1-inch		99,999	99,999	\$ 49.58	\$ 80.12	\$ 30.54	\$ 5,1151	\$ 2,0000	\$ (3,1151)	
7	Tier One Breakover (M Gal):		99,999	99,999				5,1151	2,0000	(3,1151)	
8	Tier Two Breakover (M Gal):		99,999	99,999				5,1151	2,0000	(3,1151)	
9	Tier Three Breakover (M Gal):		99,999	99,999							
10	Industrial 1.5-inch		n/a	99,999	n/a	\$ 160.24	n/a	n/a	\$ 2,0000	n/a	
11	Tier One Breakover (M Gal):		n/a	99,999				n/a	2,0000	n/a	
12	Tier Two Breakover (M Gal):		n/a	99,999				n/a	2,0000	n/a	
13	Tier Three Breakover (M Gal):		n/a	99,999							
14	Industrial 2-inch		99,999	99,999	\$ 158.67	\$ 256.39	\$ 97.72	\$ 5,1151	\$ 2,0000	\$ (3,1151)	
15	Tier One Breakover (M Gal):		99,999	99,999				5,1151	2,0000	(3,1151)	
16	Tier Two Breakover (M Gal):		99,999	99,999				5,1151	2,0000	(3,1151)	
17	Tier Three Breakover (M Gal):		99,999	99,999							
18	Industrial 3-inch		99,999	99,999	\$ 317.33	\$ 512.77	\$ 195.44	\$ 5,1151	\$ 2,0000	\$ (3,1151)	
19	Tier One Breakover (M Gal):		99,999	99,999				5,1151	2,0000	(3,1151)	
20	Tier Two Breakover (M Gal):		99,999	99,999				5,1151	2,0000	(3,1151)	
21	Tier Three Breakover (M Gal):		99,999	99,999							
22	Industrial 4-inch		99,999	99,999	\$ 495.83	\$ 801.21	\$ 305.38	\$ 5,1151	\$ 2,0000	\$ (3,1151)	
23	Tier One Breakover (M Gal):		99,999	99,999				5,1151	2,0000	(3,1151)	
24	Tier Two Breakover (M Gal):		99,999	99,999				5,1151	2,0000	(3,1151)	
25	Tier Three Breakover (M Gal):		99,999	99,999							
26	Industrial 6-inch		99,999	99,999	\$ 991.66	\$ 1,602.42	\$ 610.76	\$ 5,1151	\$ 2,0000	\$ (3,1151)	
27	Tier One Breakover (M Gal):		99,999	99,999				5,1151	2,0000	(3,1151)	
28	Tier Two Breakover (M Gal):		99,999	99,999				5,1151	2,0000	(3,1151)	
29	Tier Three Breakover (M Gal):		99,999	99,999							
30	Industrial 8-inch		99,999	99,999	\$ 1,586.65	\$ 2,563.86	\$ 977.21	\$ 5,1151	\$ 2,0000	\$ (3,1151)	
31	Tier One Breakover (M Gal):		99,999	99,999				5,1151	2,0000	(3,1151)	
32	Tier Two Breakover (M Gal):		99,999	99,999				5,1151	2,0000	(3,1151)	
33	Tier Three Breakover (M Gal):		99,999	99,999							
34	Industrial 10-inch		99,999	99,999	\$ 2,280.81	\$ 3,685.55	\$ 1,404.74	\$ 5,1151	\$ 2,0000	\$ (3,1151)	
35	Tier One Breakover (M Gal):		99,999	99,999				5,1151	2,0000	(3,1151)	
36	Tier Two Breakover (M Gal):		99,999	99,999				5,1151	2,0000	(3,1151)	
37	Tier Three Breakover (M Gal):		99,999	99,999							
38	Private Fire Service				\$ 23.61	\$ 27.00	\$ 3.39	n/a	n/a	n/a	
39	All meter connection sizes:										
40											
41											
42											
43											
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\*\*For Service Charges See Company-wide Service Charge Tariff at the end of this schedule\*\*

Supporting Schedules:

N:\2011\_Rate\_Case\Schedules\Eastern Group\2011 AWC Rate Case Model REBUTTAL SCHEDULES AWC EG 03 30 12 900am.xlsx\H3  
Processing Date: 3/30/2012 11:17 AM

Recap Schedules:

Oracle									
Line No.	Class of Service	Rate Block		[D]	Basic Service Charge		[F]	Volumetric Charge (M Gal)	
		Present	Proposed - Rebuttal		Present Rate	Proposed Rate - Rebuttal		Present Rate	Proposed Rate - Rebuttal
1									
2	Public Fire Hydrant								
3									
4	Coin Machine								
5									
6	Construction Water (2-Inch)								
7									
8									
9									
10	Construction Water (3-Inch)								
11									
12									
13									
14	Construction Water (4-Inch)								
15									
16									
17									
18	Sales for Resale (5/8-Inch)								
19									
20									
21									
22	Sales for Resale (1-Inch)								
23									
24									
25									
26	Sales for Resale (1.5-Inch)								
27									
28									
29									
30	Sales for Resale (2-Inch)								
31									
32									
33									
34	Sales for Resale (3-Inch)								
35									
36									
37									
38	Sales for Resale (4-Inch)								
39									
40									
41									
42	Sales for Resale (6-Inch)								
43									
44									
45									
46	Sales for Resale (8-Inch)								
47									
48									
49									
50	Sales for Resale (10-Inch)								
51									
52									
53									
54									
55									

\*\*For Service Charges See Company-wide Service Charge Tariff at the end of this schedule\*\*

SaddleBrooke Ranch																				
		[A]	[B]	[C]	[D]				[E]				[F]		[G]	[H]	[I]			
		Rate Block			Basic Service Charge											Volumetric Charge (M Gal)				
			Present	Proposed - Rebuttal	Present	Rate	Proposed	Rate - Rebuttal	Change	Present	Rate	Proposed	Rate - Rebuttal	Change	Present	Rate	Proposed	Rate - Rebuttal	Change	
Line No.	Class of Service																			
1	Residential 5/8 x 3/4 -inch	Tier One Breakover (M Gal):	99,999	3	\$	15.00	\$	21.00	\$	6.00					\$	4,1000	\$	4,6110	\$	0.5110
2		Tier Two Breakover (M Gal):	99,999	10												4,1000	5,7638	1,6638		
3		Tier Three Breakover (M Gal):	99,999	99,999												4,1000	7,2047	3,1047		
4																				
5																				
6	Residential 1-inch	Tier One Breakover (M Gal):	99,999	30	\$	37.50	\$	52.50	\$	15.00					\$	4,1000	\$	5,7638	\$	1,6638
7		Tier Two Breakover (M Gal):	99,999	99,999												4,1000	7,2047	3,1047		
8		Tier Three Breakover (M Gal):	99,999	99,999												4,1000	7,2047	3,1047		
9																				
10	Residential 1.5-inch	Tier One Breakover (M Gal):	n/a	65		n/a	\$	105.00	n/a							n/a	\$	5,7638	n/a	n/a
11		Tier Two Breakover (M Gal):	n/a	99,999												n/a	7,2047	n/a	n/a	
12		Tier Three Breakover (M Gal):	n/a	99,999													n/a	7,2047	n/a	n/a
13																				
14	Residential 2-inch	Tier One Breakover (M Gal):	99,999	100	\$	100.00	\$	168.00	\$	68.00					\$	4,1000	\$	5,7638	\$	1,6638
15		Tier Two Breakover (M Gal):	99,999	99,999												4,1000	7,2047	3,1047		
16		Tier Three Breakover (M Gal):	99,999	99,999												4,1000	7,2047	3,1047		
17																				
18	Residential 3-inch	Tier One Breakover (M Gal):	99,999	220	\$	150.00	\$	336.00	\$	186.00					\$	4,1000	\$	5,7638	\$	1,6638
19		Tier Two Breakover (M Gal):	99,999	99,999												4,1000	7,2047	3,1047		
20		Tier Three Breakover (M Gal):	99,999	99,999												4,1000	7,2047	3,1047		
21																				
22	Residential 4-inch	Tier One Breakover (M Gal):	99,999	350	\$	200.00	\$	525.00	\$	325.00					\$	4,1000	\$	5,7638	\$	1,6638
23		Tier Two Breakover (M Gal):	99,999	99,999												4,1000	7,2047	3,1047		
24		Tier Three Breakover (M Gal):	99,999	99,999												4,1000	7,2047	3,1047		
25																				
26	Residential 6-inch	Tier One Breakover (M Gal):	99,999	725	\$	475.00	\$	1,050.00	\$	575.00					\$	4,1000	\$	5,7638	\$	1,6638
27		Tier Two Breakover (M Gal):	99,999	99,999												4,1000	7,2047	3,1047		
28		Tier Three Breakover (M Gal):	99,999	99,999												4,1000	7,2047	3,1047		
29																				
30	Residential 8-inch	Tier One Breakover (M Gal):	99,999	1,175	\$	600.00	\$	1,680.00	\$	1,080.00					\$	4,1000	\$	5,7638	\$	1,6638
31		Tier Two Breakover (M Gal):	99,999	99,999												4,1000	7,2047	3,1047		
32		Tier Three Breakover (M Gal):	99,999	99,999												4,1000	7,2047	3,1047		
33																				
34	Residential 10-inch	Tier One Breakover (M Gal):	99,999	1,700	\$	650.00	\$	2,415.00	\$	1,765.00					\$	4,1000	\$	5,7638	\$	1,6638
35		Tier Two Breakover (M Gal):	99,999	99,999												4,1000	7,2047	3,1047		
36		Tier Three Breakover (M Gal):	99,999	99,999												4,1000	7,2047	3,1047		
37																				

(Continued)

\*\*For Service Charges See Company-wide Service Charge Tariff at the end of this schedule\*\*

Line No.		Class of Service	Rate Block			Basic Service Charge			Volumetric Charge (M Gal)		
			[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]
			Present	Proposed - Rebuttal		Present Rate	Proposed Rate - Rebuttal	Change	Present Rate	Proposed Rate - Rebuttal	Change
1	2	Commercial 5/8 x 3/4 -inch	99,999	10		\$ 15.00	\$ 32.05	\$ 17.05	\$ 4,100	\$ 5,750	\$ 1,650
3	4	Tier One Breakover (M Gal):	99,999	99,999					4,100	7,1875	3,0875
4	5	Tier Two Breakover (M Gal):	99,999	99,999					4,100	7,1875	3,0875
5	6	Tier Three Breakover (M Gal):	99,999	99,999					4,100	7,1875	3,0875
7	8	Commercial 1-inch	99,999	30		\$ 37.50	\$ 80.12	\$ 42.62	\$ 4,100	\$ 5,750	\$ 1,650
8	9	Tier One Breakover (M Gal):	99,999	99,999					4,100	7,1875	3,0875
9	10	Tier Two Breakover (M Gal):	99,999	99,999					4,100	7,1875	3,0875
10	11	Tier Three Breakover (M Gal):	99,999	99,999					4,100	7,1875	3,0875
11	12	Commercial 1.5-inch	n/a	65		n/a	\$ 160.24	n/a	n/a	\$ 5,750	n/a
12	13	Tier One Breakover (M Gal):	n/a	99,999					n/a	7,1875	n/a
13	14	Tier Two Breakover (M Gal):	n/a	99,999					n/a	7,1875	n/a
14	15	Tier Three Breakover (M Gal):	n/a	99,999					n/a	7,1875	n/a
15	16	Commercial 2-inch	99,999	100		\$ 100.00	\$ 256.39	\$ 156.39	\$ 4,100	\$ 5,750	\$ 1,650
16	17	Tier One Breakover (M Gal):	99,999	99,999					4,100	7,1875	3,0875
17	18	Tier Two Breakover (M Gal):	99,999	99,999					4,100	7,1875	3,0875
18	19	Tier Three Breakover (M Gal):	99,999	99,999					4,100	7,1875	3,0875
19	20	Commercial 3-inch	99,999	220		\$ 150.00	\$ 512.77	\$ 362.77	\$ 4,100	\$ 5,750	\$ 1,650
20	21	Tier One Breakover (M Gal):	99,999	99,999					4,100	7,1875	3,0875
21	22	Tier Two Breakover (M Gal):	99,999	99,999					4,100	7,1875	3,0875
22	23	Tier Three Breakover (M Gal):	99,999	99,999					4,100	7,1875	3,0875
23	24	Commercial 4-inch	99,999	350		\$ 200.00	\$ 801.21	\$ 601.21	\$ 4,100	\$ 5,750	\$ 1,650
24	25	Tier One Breakover (M Gal):	99,999	99,999					4,100	7,1875	3,0875
25	26	Tier Two Breakover (M Gal):	99,999	99,999					4,100	7,1875	3,0875
26	27	Tier Three Breakover (M Gal):	99,999	99,999					4,100	7,1875	3,0875
27	28	Commercial 6-inch	99,999	725		\$ 475.00	\$ 1,602.42	\$ 1,127.42	\$ 4,100	\$ 5,750	\$ 1,650
28	29	Tier One Breakover (M Gal):	99,999	99,999					4,100	7,1875	3,0875
29	30	Tier Two Breakover (M Gal):	99,999	99,999					4,100	7,1875	3,0875
30	31	Tier Three Breakover (M Gal):	99,999	99,999					4,100	7,1875	3,0875
31	32	Commercial 8-inch	99,999	1,175		\$ 600.00	\$ 2,563.86	\$ 1,963.86	\$ 4,100	\$ 5,750	\$ 1,650
32	33	Tier One Breakover (M Gal):	99,999	99,999					4,100	7,1875	3,0875
33	34	Tier Two Breakover (M Gal):	99,999	99,999					4,100	7,1875	3,0875
34	35	Tier Three Breakover (M Gal):	99,999	99,999					4,100	7,1875	3,0875
35	36	Commercial 10-inch	99,999	1,700		\$ 650.00	\$ 3,685.55	\$ 3,035.55	\$ 4,100	\$ 5,750	\$ 1,650
36	37	Tier One Breakover (M Gal):	99,999	99,999					4,100	7,1875	3,0875
37	38	Tier Two Breakover (M Gal):	99,999	99,999					4,100	7,1875	3,0875
38	39	Tier Three Breakover (M Gal):	99,999	99,999					4,100	7,1875	3,0875
39	40										
40	41										
41	42										
42	43										
43	44										
44	45										
45	46										
46	47										
47	48										
48	49										
49	50										
50	51										
51	52										
52	53										
53	54										
54	55										

(Continued)

\*\*For Service Charges See Company-wide Service Charge Tariff at the end of this schedule\*\*



SaddleBrooke Ranch																			
Line No.	Class of Service	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]									
											Rate Block			Basic Service Charge			Volumetric Charge (M Gal)		
											Present	Proposed - Rebuttal	Change	Present Rate	Proposed Rate - Rebuttal	Change	Present Rate	Proposed Rate - Rebuttal	Change
1	Industrial 5/8 x 3/4 -inch																		
2																			
3																			
4																			
5																			
6	Industrial 1-inch																		
7																			
8																			
9																			
10	Industrial 1.5-inch																		
11																			
12																			
13																			
14	Industrial 2-inch																		
15																			
16																			
17																			
18	Industrial 3-inch																		
19																			
20																			
21																			
22	Industrial 4-inch																		
23																			
24																			
25																			
26	Industrial 6-inch																		
27																			
28																			
29																			
30	Industrial 8-inch																		
31																			
32																			
33																			
34	Industrial 10-inch																		
35																			
36																			
37																			
38	Private Fire Service																		
39																			
40																			

(Continued)

\*\*For Service Charges See Company-wide Service Charge Tariff at the end of this schedule\*\*

Line No.	Class of Service	Rate Block			SaddleBrooke Ranch			Volumetric Charge (M Gal)		
		Present	Proposed - Rebuttal	Change	Present Rate	Proposed Rate - Rebuttal	Change	Present Rate	Proposed Rate - Rebuttal	Change
1	Public Fire Hydrant									
2										
3	Coin Machine									
4										
5										
6	Construction Water (2-Inch)									
7	Tier One Breakover (M Gal):	99,999	100		\$ 100.00	\$ 256.39	\$ 156.39	\$ 4,100	\$ 5,750	\$ 1,650
8	Tier Two Breakover (M Gal):	99,999	99,999					4,100	7,1875	3,0875
9	Tier Three Breakover (M Gal):	99,999	99,999					4,100	7,1875	3,0875
10	Construction Water (3-Inch)									
11	Tier One Breakover (M Gal):	99,999	220		\$ 150.00	\$ 512.77	\$ 362.77	\$ 4,100	\$ 5,750	\$ 1,650
12	Tier Two Breakover (M Gal):	99,999	99,999					4,100	7,1875	3,0875
13	Tier Three Breakover (M Gal):	99,999	99,999					4,100	7,1875	3,0875
14	Construction Water (4-Inch)									
15	Tier One Breakover (M Gal):	99,999	350		\$ 200.00	\$ 801.21	\$ 601.21	\$ 4,100	\$ 5,750	\$ 1,650
16	Tier Two Breakover (M Gal):	99,999	99,999					4,100	7,1875	3,0875
17	Tier Three Breakover (M Gal):	99,999	99,999					4,100	7,1875	3,0875
18	Sales for Resale (5/8-Inch)									
19	Tier One Breakover (M Gal):	99,999	99,999		\$ 15.00	\$ 32.05	\$ 17.05	\$ 4,100	\$ 5,750	\$ 1,650
20	Tier Two Breakover (M Gal):	99,999	99,999					4,100	5,750	1,650
21	Tier Three Breakover (M Gal):	99,999	99,999					4,100	5,750	1,650
22	Sales for Resale (1-Inch)									
23	Tier One Breakover (M Gal):	99,999	99,999		\$ 37.50	\$ 80.12	\$ 42.62	\$ 4,100	\$ 5,750	\$ 1,650
24	Tier Two Breakover (M Gal):	99,999	99,999					4,100	5,750	1,650
25	Tier Three Breakover (M Gal):	99,999	99,999					4,100	5,750	1,650
26	Sales for Resale (1.5-Inch)									
27	Tier One Breakover (M Gal):	n/a	99,999		n/a	\$ 160.24	n/a	n/a	\$ 5,750	n/a
28	Tier Two Breakover (M Gal):	n/a	99,999					n/a	5,750	n/a
29	Tier Three Breakover (M Gal):	n/a	99,999					n/a	5,750	n/a
30	Sales for Resale (2-Inch)									
31	Tier One Breakover (M Gal):	99,999	99,999		\$ 100.00	\$ 256.39	\$ 156.39	\$ 4,100	\$ 5,750	\$ 1,650
32	Tier Two Breakover (M Gal):	99,999	99,999					4,100	5,750	1,650
33	Tier Three Breakover (M Gal):	99,999	99,999					4,100	5,750	1,650
34	Sales for Resale (3-Inch)									
35	Tier One Breakover (M Gal):	99,999	99,999		\$ 150.00	\$ 512.77	\$ 362.77	\$ 4,100	\$ 5,750	\$ 1,650
36	Tier Two Breakover (M Gal):	99,999	99,999					4,100	5,750	1,650
37	Tier Three Breakover (M Gal):	99,999	99,999					4,100	5,750	1,650
38	Sales for Resale (4-Inch)									
39	Tier One Breakover (M Gal):	99,999	99,999		\$ 200.00	\$ 801.21	\$ 601.21	\$ 4,100	\$ 5,750	\$ 1,650
40	Tier Two Breakover (M Gal):	99,999	99,999					4,100	5,750	1,650
41	Tier Three Breakover (M Gal):	99,999	99,999					4,100	5,750	1,650
42	Sales for Resale (6-Inch)									
43	Tier One Breakover (M Gal):	99,999	99,999		\$ 475.00	\$ 1,602.42	\$ 1,127.42	\$ 4,100	\$ 5,750	\$ 1,650
44	Tier Two Breakover (M Gal):	99,999	99,999					4,100	5,750	1,650
45	Tier Three Breakover (M Gal):	99,999	99,999					4,100	5,750	1,650
46	Sales for Resale (8-Inch)									
47	Tier One Breakover (M Gal):	99,999	99,999		\$ 600.00	\$ 2,563.86	\$ 1,963.86	\$ 4,100	\$ 5,750	\$ 1,650
48	Tier Two Breakover (M Gal):	99,999	99,999					4,100	5,750	1,650
49	Tier Three Breakover (M Gal):	99,999	99,999					4,100	5,750	1,650
50	Sales for Resale (10-Inch)									
51	Tier One Breakover (M Gal):	99,999	99,999		\$ 650.00	\$ 3,685.55	\$ 3,035.55	\$ 4,100	\$ 5,750	\$ 1,650
52	Tier Two Breakover (M Gal):	99,999	99,999					4,100	5,750	1,650
53	Tier Three Breakover (M Gal):	99,999	99,999					4,100	5,750	1,650
54										
55										

\*\*For Service Charges See Company-wide Service Charge Tariff at the end of this schedule\*\*

Winkelman																			
Line No.	Class of Service	Rate Block			Basic Service Charge			Volumetric Charge (M Gal)											
		[A]		[B]	[C]	[D]	[E]		[F]	[G]	[H]	[I]							
				Present	Proposed - Rebuttal	Present Rate	Rate - Rebuttal	Change	Present Rate	Rate - Rebuttal	Change								
1	Residential 5/8 x 3/4 -inch			3	3			\$	14.84	\$	19.00	\$	4.16						
2				10	10														
3				99,999	99,999														
4																			
5																			
6	Residential 1-inch			10	30			\$	37.10	\$	47.50	\$	10.40						
7				99,999	99,999														
8				99,999	99,999														
9																			
10	Residential 1.5-inch			n/a	65				n/a	\$	95.00		n/a						
11				n/a	99,999														
12				n/a	99,999														
13																			
14	Residential 2-inch			125	100			\$	118.73	\$	152.00	\$	33.27						
15				99,999	99,999														
16				99,999	99,999														
17																			
18	Residential 3-inch			325	220			\$	237.46	\$	304.00	\$	66.54						
19				99,999	99,999														
20				99,999	99,999														
21																			
22	Residential 4-inch			500	350			\$	371.03	\$	475.00	\$	103.97						
23				99,999	99,999														
24				99,999	99,999														
25																			
26	Residential 6-inch			925	725			\$	742.06	\$	950.00	\$	207.94						
27				99,999	99,999														
28				99,999	99,999														
29																			
30	Residential 8-inch			1,500	1,175			\$	1,187.30	\$	1,520.00	\$	332.70						
31				99,999	99,999														
32				99,999	99,999														
33																			
34	Residential 10-inch			2,647	1,700			\$	1,706.74	\$	2,185.00	\$	478.26						
35				99,999	99,999														
36				99,999	99,999														
37																			

(Continued)

\*\*For Service Charges See Company-wide Service Charge Tariff at the end of this schedule\*\*

Winkelman										
[A]		[B]	[C]	[D]	[E]		[F]	[G]	[H]	[I]
Rate Block			Basic Service Charge				Volumetric Charge (M Gal)			
		Present	Proposed - Rebuttal	Present Rate	Proposed Rate - Rebuttal	Change	Present Rate	Proposed Rate - Rebuttal	Change	
Class of Service	Commercial 5/8 x 3/4 -inch	10	10	\$ 14.84	\$ 19.00	\$ 4.16	\$ 1,8074	\$ 2,4712	\$ 0.6638	
	Tier One Breakover (M Gal):	99,999	99,999				2,2595	3,0890	0.8295	
	Tier Two Breakover (M Gal):	99,999	99,999				2,2595	3,0890	0.8295	
Commercial 1-inch	Tier Three Breakover (M Gal):									
	Tier One Breakover (M Gal):	40	30	\$ 37.10	\$ 47.50	\$ 10.40	\$ 1,8074	\$ 2,4712	\$ 0.6638	
	Tier Two Breakover (M Gal):	99,999	99,999				2,2595	3,0890	0.8295	
Commercial 1.5-inch	Tier Three Breakover (M Gal):	99,999	99,999				2,2595	3,0890	0.8295	
	Tier One Breakover (M Gal):	n/a	65	n/a	\$ 95.00	n/a	n/a	\$ 2,4712	n/a	n/a
	Tier Two Breakover (M Gal):	n/a	99,999				n/a	3,0890	n/a	n/a
Commercial 2-inch	Tier Three Breakover (M Gal):	n/a	99,999				n/a	3,0890	n/a	n/a
	Tier One Breakover (M Gal):	125	100	\$ 118.73	\$ 152.00	\$ 33.27	\$ 1,8074	\$ 2,4712	\$ 0.6638	
	Tier Two Breakover (M Gal):	99,999	99,999				2,2595	3,0890	0.8295	
Commercial 3-inch	Tier Three Breakover (M Gal):	99,999	99,999				2,2595	3,0890	0.8295	
	Tier One Breakover (M Gal):	325	220	\$ 237.46	\$ 304.00	\$ 66.54	\$ 1,8074	\$ 2,4712	\$ 0.6638	
	Tier Two Breakover (M Gal):	99,999	99,999				2,2595	3,0890	0.8295	
Commercial 4-inch	Tier Three Breakover (M Gal):	99,999	99,999				2,2595	3,0890	0.8295	
	Tier One Breakover (M Gal):	500	350	\$ 371.03	\$ 475.00	\$ 103.97	\$ 1,8074	\$ 2,4712	\$ 0.6638	
	Tier Two Breakover (M Gal):	99,999	99,999				2,2595	3,0890	0.8295	
Commercial 6-inch	Tier Three Breakover (M Gal):	99,999	99,999				2,2595	3,0890	0.8295	
	Tier One Breakover (M Gal):	925	725	\$ 742.06	\$ 950.00	\$ 207.94	\$ 1,8074	\$ 2,4712	\$ 0.6638	
	Tier Two Breakover (M Gal):	99,999	99,999				2,2595	3,0890	0.8295	
Commercial 8-inch	Tier Three Breakover (M Gal):	99,999	99,999				2,2595	3,0890	0.8295	
	Tier One Breakover (M Gal):	1,500	1,175	\$ 1,187.30	\$ 1,520.00	\$ 332.70	\$ 1,8074	\$ 2,4712	\$ 0.6638	
	Tier Two Breakover (M Gal):	99,999	99,999				2,2595	3,0890	0.8295	
Commercial 10-inch	Tier Three Breakover (M Gal):	99,999	99,999				2,2595	3,0890	0.8295	
	Tier One Breakover (M Gal):	2,647	1,700	\$ 1,706.74	\$ 2,185.00	\$ 478.26	\$ 1,8074	\$ 2,4712	\$ 0.6638	
	Tier Two Breakover (M Gal):	99,999	99,999				2,2595	3,0890	0.8295	
	Tier Three Breakover (M Gal):	99,999	99,999				2,2595	3,0890	0.8295	

(Continued)

\*\*For Service Charges See Company-wide Service Charge Tariff at the end of this schedule\*\*

Winkelman																										
Line No.	Class of Service	[A]	[B]			[C]			[D]			[E]			[F]			[G]			[H]			[I]		
			Rate Block			Proposed - Rebuttal			Present			Basic Service Charge			Proposed			Present			Volumetric Charge (/M Gal)			Proposed		
			Present	Rebuttal	Change	Rate	Rebuttal	Change	Rate	Rebuttal	Change	Rate	Rebuttal	Change	Rate	Rebuttal	Change	Rate	Rebuttal	Change	Rate	Rebuttal	Change	Rate	Rebuttal	Change
1																										
2	Industrial 5/8 x 3/4 -inch	Tier One Breakover (M Gal):	99,999	99,999																						
3		Tier Two Breakover (M Gal):	99,999	99,999																						
4		Tier Three Breakover (M Gal):	99,999	99,999																						
5																										
6	Industrial 1-inch	Tier One Breakover (M Gal):	99,999	99,999																						
7		Tier Two Breakover (M Gal):	99,999	99,999																						
8		Tier Three Breakover (M Gal):	99,999	99,999																						
9																										
10	Industrial 1.5-inch	Tier One Breakover (M Gal):	n/a	99,999																						
11		Tier Two Breakover (M Gal):	n/a	99,999																						
12		Tier Three Breakover (M Gal):	n/a	99,999																						
13																										
14	Industrial 2-inch	Tier One Breakover (M Gal):	99,999	99,999																						
15		Tier Two Breakover (M Gal):	99,999	99,999																						
16		Tier Three Breakover (M Gal):	99,999	99,999																						
17																										
18	Industrial 3-inch	Tier One Breakover (M Gal):	99,999	99,999																						
19		Tier Two Breakover (M Gal):	99,999	99,999																						
20		Tier Three Breakover (M Gal):	99,999	99,999																						
21																										
22	Industrial 4-inch	Tier One Breakover (M Gal):	99,999	99,999																						
23		Tier Two Breakover (M Gal):	99,999	99,999																						
24		Tier Three Breakover (M Gal):	99,999	99,999																						
25																										
26	Industrial 6-inch	Tier One Breakover (M Gal):	99,999	99,999																						
27		Tier Two Breakover (M Gal):	99,999	99,999																						
28		Tier Three Breakover (M Gal):	99,999	99,999																						
29																										
30	Industrial 8-inch	Tier One Breakover (M Gal):	99,999	99,999																						
31		Tier Two Breakover (M Gal):	99,999	99,999																						
32		Tier Three Breakover (M Gal):	99,999	99,999																						
33																										
34	Industrial 10-inch	Tier One Breakover (M Gal):	99,999	99,999																						
35		Tier Two Breakover (M Gal):	99,999	99,999																						
36		Tier Three Breakover (M Gal):	99,999	99,999																						
37																										
38																										
39	Private Fire Service																									
	All meter connection sizes:																									

(Continued)

\*\*For Service Charges See Company-wide Service Charge Tariff at the end of this schedule\*\*

Line No.	Class of Service	Rate Block				Basic Service Charge				Volumetric Charge (M Gal)			
		Present	Proposed - Rebuttal	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]
1													
2	Public Fire Hydrant												
3													
4	Coin Machine												
5													
6	Construction Water (2-Inch)												
7													
8													
9													
10	Construction Water (3-Inch)												
11													
12													
13													
14	Construction Water (4-Inch)												
15													
16													
17													
18	Sales for Resale (5/8-Inch)												
19													
20													
21													
22	Sales for Resale (1-Inch)												
23													
24													
25													
26	Sales for Resale (1.5-Inch)												
27													
28													
29													
30	Sales for Resale (2-Inch)												
31													
32													
33													
34	Sales for Resale (3-Inch)												
35													
36													
37													
38	Sales for Resale (4-Inch)												
39													
40													
41													
42	Sales for Resale (6-Inch)												
43													
44													
45													
46	Sales for Resale (8-Inch)												
47													
48													
49													
50	Sales for Resale (10-Inch)												
51													
52													
53													
54													
55													

\*\*For Service Charges See Company-wide Service Charge Tariff at the end of this schedule\*\*

Eastern Group

Line No.	Service Charges	[A] Current Rate	[B] Proposed Rate*
1			
2	Establishment	\$16.00	\$32.00
3			
4	Guarantee Deposit	Residential - maximum: Two(2) times average customer class bill	
5		Non-Residential-maximum: Two and one-half (2 1/2) times that customers	
6		estimated maximum monthly bill.	
7			No Change
8	Reconnection for Delinquency	\$16.00	\$32.00
9			
10			
11			
12			
13	Re-Establishment	Eight (8) times the customer's monthly minimum charge, or payment of the minimums since disconnection, whichever is less.	
14			
15			No Change
16	Service Call Out	During regular working hours - No charge. After regular working hours, on Saturdays, Sundays, or holidays - \$35.00	During regular working hours - no charge. After regular working hours, on Saturdays, Sundays, or holidays - a \$35.00 After Hours Service Charge. The current Service Call Out After Hours Charge is eliminated.
17			
18			
19			
20	Returned Check	\$25.00	No Change in rate. Change language to read "Returned payment."
21			
22			
23			
24	Meter Re-read	No charge, if done during regular working hours, otherwise, a \$35.00 service call out.	All Meter Re-Reads - \$25.00
25			
26			
27	Meter Test	No charge for the first test; for the second test for the same customer within any twelve (12) month period, \$50.00, or actual time and material whichever is greater.	No charge for the first test; for the second test for the same customer within any twelve (12) month period, \$25.00, or actual time and material, whichever is greater.
28			
29			
30			
31	Service Line and Meter Installation		
32			
33			
34			
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36			
37			
38			
39			
40			
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42			
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44			
45			
46			
47			
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49			
50			
51	Late Charge	1.5 percent after 15 days.	
52			
53			
54			
55			

\*Actual cost of service line if boring under roadway is required.

No Change

\*Adopts Staff's recommended service charges.

Supporting Schedules:

N:\2011\_Rate\_Cases\Schedules\Eastern Group\2011 AWC Rate Case Model REBUTTAL SCHEDULES AWC EG FINAL.xlsxH3  
Processing Date: 4/4/2012 2:37 PM

Recap Schedules:

[A]		[B]	[C]	Superstition (Apache Junction, Superior, Miami)			[D]	[E]	[F]	[G]	[H]	[I]
		Typical Bill										
Line No.		Base Rates	ACRM / PPA Surcharge	Monthly Consumption (M Gal)	Present Rates		Proposed Rates - Rebuilt		Increase			
					Base	Surcharge	Total	Rebuilt	Amount	Percent	Amount	Percent
1	Residential 5/8 x 3/4 -inch			-	\$ 17.52	\$ -	\$ 17.52	\$ 23.00	\$ 5.48	31.28%	\$ 5.48	31.28%
2				5	30.07	-	30.07	38.94	8.87	29.49%	8.87	29.49%
3				15	62.17	-	62.17	79.70	17.53	28.20%	17.53	28.20%
4				20	80.00	-	80.00	102.34	22.34	27.93%	22.34	27.93%
5	Present Rates			25	97.83	-	97.83	124.98	27.15	27.76%	27.15	27.76%
6				30	115.66	-	115.66	147.63	31.97	27.64%	31.97	27.64%
7				35	133.49	-	133.49	170.27	36.78	27.55%	36.78	27.55%
8	Basic Service Charge:	\$ 17.52	\$ -	40	151.32	-	151.32	192.91	41.59	27.48%	41.59	27.48%
9				45	169.16	-	169.16	215.56	46.40	27.43%	46.40	27.43%
10	Tier One Breakover (M Gal):	3		50	186.99	-	186.99	238.20	51.21	27.39%	51.21	27.39%
11	Tier Two Breakover (M Gal):	10		55	204.82	-	204.82	260.84	56.02	27.35%	56.02	27.35%
12	Tier Three Breakover (M Gal):	99,999		60	222.65	-	222.65	283.49	60.84	27.32%	60.84	27.32%
13				65	240.48	-	240.48	306.13	65.65	27.30%	65.65	27.30%
14	Tier One Rate:	\$ 2.2820	\$ -	70	258.31	-	258.31	328.77	70.46	27.28%	70.46	27.28%
15	Tier Two Rate:	2.8527		75	276.14	-	276.14	351.41	75.27	27.26%	75.27	27.26%
16	Tier Three Rate:	3.5663		100	365.30	-	365.30	464.63	99.33	27.19%	99.33	27.19%
17				150	543.62	-	543.62	691.06	147.44	27.12%	147.44	27.12%
18	Proposed Rates - Rebuilt			200	721.93	-	721.93	917.49	195.56	27.09%	195.56	27.09%
19				250	900.25	-	900.25	1,143.92	243.67	27.07%	243.67	27.07%
20				300	1,078.56	-	1,078.56	1,370.35	291.79	27.05%	291.79	27.05%
21	Basic Service Charge:	\$ 23.00	\$ -	350	1,256.88	-	1,256.88	1,596.78	339.90	27.04%	339.90	27.04%
22				400	1,435.19	-	1,435.19	1,823.21	388.02	27.04%	388.02	27.04%
23	Tier One Breakover (M Gal):	3		450	1,613.51	-	1,613.51	2,049.64	436.13	27.03%	436.13	27.03%
24	Tier Two Breakover (M Gal):	10		500	1,791.82	-	1,791.82	2,276.07	484.25	27.03%	484.25	27.03%
25	Tier Three Breakover (M Gal):	99,999		550	1,970.14	-	1,970.14	2,502.50	532.37	27.02%	532.37	27.02%
26				600	2,148.45	-	2,148.45	2,728.93	580.48	27.02%	580.48	27.02%
27	Tier One Rate:	\$ 2.8983	\$ -	650	2,326.77	-	2,326.77	2,955.36	628.60	27.02%	628.60	27.02%
28	Tier Two Rate:	3.6229		700	2,505.08	-	2,505.08	3,181.79	676.71	27.01%	676.71	27.01%
29	Tier Three Rate:	4.5286		750	2,683.40	-	2,683.40	3,408.22	724.83	27.01%	724.83	27.01%
30				800	2,861.71	-	2,861.71	3,634.65	772.94	27.01%	772.94	27.01%
31				850	3,040.03	-	3,040.03	3,861.08	821.06	27.01%	821.06	27.01%
32				900	3,218.34	-	3,218.34	4,087.51	869.17	27.01%	869.17	27.01%
33				1,000	3,574.97	-	3,574.97	4,540.38	965.40	27.00%	965.40	27.00%
34				1,500	5,358.12	-	5,358.12	6,804.68	1,446.56	27.00%	1,446.56	27.00%
35				2,000	7,141.27	-	7,141.27	9,068.98	1,927.71	26.99%	1,927.71	26.99%
36				2,500	8,924.42	-	8,924.42	11,333.28	2,408.86	26.99%	2,408.86	26.99%
37				3,000	10,707.57	-	10,707.57	13,597.59	2,890.02	26.99%	2,890.02	26.99%
38												
39												
40												
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Average Usage: 6.3  
Median Usage: 4.6  
Standardized Usage: 7.5

Proposed Bill at Lifeline Usage (3.0 M Gal): \$ 31.69  
Cost of Service at Lifeline Usage (3.0 M Gal): \$ 38.18  
% Cost Discount at Lifeline Usage: 16.99%



Cochise (Bisbee)									
[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	
Line No.	Residential 5/8 x 3/4 - inch	ACRM / PPA Surcharge	Monthly Consumption (M Gal)	Typical Bill			Proposed Rates - Rebuttal	Increase	
				Base	Surcharge	Total		Amount	Percent
1				\$ 13.36	\$ -	\$ 13.36	\$ 20.00	\$ 6.64	49.70%
2			5	33.18	-	33.18	39.48	6.29	18.97%
3			15	83.86	-	83.86	89.27	5.41	6.45%
4			20	112.02	-	112.02	116.93	4.92	4.39%
5			25	140.17	-	140.17	144.60	4.42	3.16%
6			30	168.33	-	168.33	172.26	3.93	2.34%
7			35	196.49	-	196.49	199.93	3.44	1.75%
8	Basic Service Charge:		40	224.64	-	224.64	227.59	2.95	1.31%
9	Tier One Breakover (M Gal):	3	45	252.80	-	252.80	255.25	2.46	0.97%
10	Tier Two Breakover (M Gal):	10	50	280.95	-	280.95	282.92	1.96	0.70%
11	Tier Three Breakover (M Gal):	99,999	55	309.11	-	309.11	310.58	1.47	0.48%
12			60	337.27	-	337.27	338.25	0.98	0.29%
13	Tier One Rate:	\$ 3.6039	65	365.42	-	365.42	365.91	0.49	0.13%
14	Tier Two Rate:	4.5049	70	393.58	-	393.58	393.57	(0.00)	0.00%
15	Tier Three Rate:	5.6312	75	421.73	-	421.73	421.24	(0.50)	-0.12%
16			100	562.51	-	562.51	559.56	(2.95)	-0.53%
17	Proposed Rates - Rebuttal		150	844.07	-	844.07	836.20	(7.87)	-0.93%
18			200	1,125.63	-	1,125.63	1,112.84	(12.79)	-1.14%
19			250	1,407.19	-	1,407.19	1,389.48	(17.71)	-1.26%
20			300	1,688.75	-	1,688.75	1,666.12	(22.63)	-1.34%
21			350	1,970.31	-	1,970.31	1,942.76	(27.55)	-1.40%
22	Basic Service Charge:	\$ 20.00	400	2,251.87	-	2,251.87	2,219.40	(32.47)	-1.44%
23			450	2,533.43	-	2,533.43	2,496.04	(37.39)	-1.48%
24	Tier One Breakover (M Gal):	3	500	2,814.99	-	2,814.99	2,772.88	(42.31)	-1.50%
25	Tier Two Breakover (M Gal):	10	550	3,096.55	-	3,096.55	3,049.32	(47.23)	-1.53%
26	Tier Three Breakover (M Gal):	99,999	600	3,378.11	-	3,378.11	3,325.96	(52.15)	-1.54%
27			650	3,659.67	-	3,659.67	3,602.60	(57.07)	-1.56%
28	Tier One Rate:	\$ 3.5410	700	3,941.23	-	3,941.23	3,879.24	(61.99)	-1.57%
29	Tier Two Rate:	4.4262	750	4,222.79	-	4,222.79	4,155.88	(66.91)	-1.58%
30	Tier Three Rate:	5.5328	800	4,504.35	-	4,504.35	4,432.52	(71.83)	-1.59%
31			850	4,785.91	-	4,785.91	4,709.16	(76.75)	-1.60%
32			900	5,067.47	-	5,067.47	4,985.80	(81.67)	-1.61%
33			1,000	5,630.59	-	5,630.59	5,539.08	(91.51)	-1.63%
34			1,500	8,446.19	-	8,446.19	8,305.49	(140.71)	-1.67%
35			2,000	11,261.79	-	11,261.79	11,071.89	(189.91)	-1.69%
36			2,500	14,077.39	-	14,077.39	13,838.29	(239.10)	-1.70%
37			3,000	16,892.99	-	16,892.99	16,604.69	(288.30)	-1.71%
38									
39									
40									
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42									
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Average Usage: 4.8  
 Median Usage: 3.3  
 Standardized Usage: 7.5

Proposed Bill at Lifeline Usage (3.0 M Gal): \$ 30.62  
 Cost of Service at Lifeline Usage (3.0 M Gal): \$ 32.21  
 % Cost Discount at Lifeline Usage: 4.93%

Cochise (Sierra Vista)									
[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	
Line No.	Base Rates	ACRM / PPA Surcharge	Monthly Consumption (M Gal)	Typical Bill			Increase		
				Base	Surcharge	Total	Proposed Rates - Rebuttal	Amount	
1	Residential 5/8 x 3/4 -inch		-	\$ 13.36	\$ -	\$ 13.36	\$ 20.00	\$ 6.64	49.70%
2			5	20.85	-	20.85	29.13	8.28	39.68%
3			15	40.02	-	40.02	52.47	12.46	31.13%
4	Present Rates		20	50.66	-	50.66	65.44	14.78	29.18%
5			25	61.31	-	61.31	78.41	17.11	27.90%
6			30	71.95	-	71.95	91.38	19.43	27.00%
7			35	82.60	-	82.60	104.35	21.75	26.34%
8	Basic Service Charge:		40	93.24	-	93.24	117.32	24.08	25.82%
9			45	103.89	-	103.89	130.29	26.40	25.41%
10	Tier One Breakover (M Gal):	3	50	114.53	-	114.53	143.26	28.72	25.08%
11	Tier Two Breakover (M Gal):	10	55	125.18	-	125.18	156.22	31.05	24.80%
12	Tier Three Breakover (M Gal):	99,999	60	135.82	-	135.82	169.19	33.37	24.57%
13			65	146.47	-	146.47	182.16	35.70	24.37%
14	Tier One Rate:	\$ 1.3626	70	157.11	-	157.11	195.13	38.02	24.20%
15	Tier Two Rate:	1.7032	75	167.76	-	167.76	208.10	40.34	24.05%
16	Tier Three Rate:	2.1290	100	220.98	-	220.98	272.94	51.96	23.51%
17			150	327.43	-	327.43	402.63	75.20	22.97%
18	Proposed Rates - Rebuttal		200	433.88	-	433.88	532.32	98.44	22.69%
19			250	540.33	-	540.33	662.01	121.67	22.52%
20			300	646.78	-	646.78	791.69	144.91	22.41%
21	Basic Service Charge:		350	753.23	-	753.23	921.38	168.15	22.32%
22			400	859.68	-	859.68	1,051.07	191.39	22.26%
23	Tier One Breakover (M Gal):	3	450	966.13	-	966.13	1,180.76	214.62	22.21%
24	Tier Two Breakover (M Gal):	10	500	1,072.58	-	1,072.58	1,310.44	237.86	22.18%
25	Tier Three Breakover (M Gal):	99,999	550	1,179.03	-	1,179.03	1,440.13	261.10	22.15%
26			600	1,285.48	-	1,285.48	1,569.82	284.34	22.12%
27	Tier One Rate:	\$ 1.6600	650	1,391.93	-	1,391.93	1,699.51	307.57	22.10%
28	Tier Two Rate:	2.0750	700	1,498.38	-	1,498.38	1,829.19	330.81	22.08%
29	Tier Three Rate:	2.5938	750	1,604.83	-	1,604.83	1,958.88	354.05	22.06%
30			800	1,711.28	-	1,711.28	2,098.57	377.29	22.05%
31			850	1,817.73	-	1,817.73	2,218.26	400.52	22.03%
32			900	1,924.18	-	1,924.18	2,347.94	423.76	22.02%
33			1,000	2,137.08	-	2,137.08	2,607.32	470.24	22.00%
34			1,500	3,201.58	-	3,201.58	3,904.19	702.61	21.95%
35			2,000	4,266.08	-	4,266.08	5,201.07	934.99	21.92%
36			2,500	5,330.58	-	5,330.58	6,497.94	1,167.36	21.90%
37			3,000	6,395.08	-	6,395.08	7,794.82	1,399.74	21.89%
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41			Average Usage:	\$ 25.95	\$ -	\$ 25.95	\$ 35.34	\$ 9.39	36.18%
42			Median Usage:	\$ 21.89	\$ -	\$ 21.89	\$ 30.40	\$ 8.50	38.84%
43			Standardized Usage:	\$ 25.11	\$ -	\$ 25.11	\$ 34.32	\$ 9.21	36.66%
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Proposed Bill at Lifeline Usage (3.0 M Gal): \$ 24.98  
Cost of Service at Lifeline Usage (3.0 M Gal): \$ 32.21  
% Cost Discount at Lifeline Usage: 22.45%

San Manuel										
[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]		
Line No.	Base Rates	ACRM / PPA Surcharge	Monthly Consumption (M Gal)	Typical Bill			Proposed Rates - Rebuttal	Increase		
				Base	Surcharge	Total		Amount	Percent	
1	Residential 5/8 x 3/4 -inch		-	\$ 21.52	\$ -	\$ 21.52	\$ 21.00	\$ (0.52)	-2.42%	
2			5	36.38	-	36.38	46.36	9.98	27.43%	
3			15	74.38	-	74.38	111.20	36.82	49.51%	
4			20	95.49	-	95.49	147.23	51.74	54.18%	
5			25	116.60	-	116.60	183.25	66.65	57.16%	
6			30	137.71	-	137.71	219.27	81.56	59.23%	
7			35	158.82	-	158.82	255.30	96.47	60.74%	
8	Basic Service Charge:		40	179.93	-	179.93	291.32	111.39	61.91%	
9			45	201.04	-	201.04	327.34	126.30	62.82%	
10	Tier One Breakover (M Gal):	3	50	222.15	-	222.15	363.37	141.21	63.57%	
11	Tier Two Breakover (M Gal):	10	55	243.26	-	243.26	399.39	156.13	64.18%	
12	Tier Three Breakover (M Gal):	99,999	60	264.37	-	264.37	435.41	171.04	64.70%	
13			65	285.48	-	285.48	471.44	185.95	65.14%	
14	Tier One Rate:	\$ 2,7022	70	306.60	-	306.60	507.46	200.87	65.51%	
15	Tier Two Rate:	3,3775	75	327.71	-	327.71	543.48	215.78	65.85%	
16	Tier Three Rate:	4,2221	100	433.26	-	433.26	723.60	290.34	67.01%	
17			150	644.36	-	644.36	1,083.84	439.47	68.20%	
18			200	855.47	-	855.47	1,444.07	588.60	68.80%	
19	Proposed Rates - Rebuttal		250	1,066.57	-	1,066.57	1,804.30	737.73	69.17%	
20			300	1,277.68	-	1,277.68	2,164.54	886.86	69.41%	
21			350	1,488.78	-	1,488.78	2,524.77	1,035.99	69.59%	
22	Basic Service Charge:	\$ 21.00	400	1,699.89	-	1,699.89	2,885.01	1,185.12	69.72%	
23			450	1,910.99	-	1,910.99	3,245.24	1,334.25	69.82%	
24	Tier One Breakover (M Gal):	3	500	2,122.10	-	2,122.10	3,605.48	1,483.38	69.90%	
25	Tier Two Breakover (M Gal):	10	550	2,333.20	-	2,333.20	3,965.71	1,632.51	69.97%	
26	Tier Three Breakover (M Gal):	99,999	600	2,544.31	-	2,544.31	4,325.94	1,781.64	70.02%	
27			650	2,755.41	-	2,755.41	4,686.18	1,930.77	70.07%	
28	Tier One Rate:	\$ 4,6110	700	2,966.52	-	2,966.52	5,046.41	2,079.90	70.11%	
29	Tier Two Rate:	5,7638	750	3,177.62	-	3,177.62	5,406.65	2,229.02	70.15%	
30	Tier Three Rate:	7,2047	800	3,388.73	-	3,388.73	5,766.88	2,378.15	70.18%	
31			850	3,599.83	-	3,599.83	6,127.12	2,527.28	70.21%	
32			900	3,810.94	-	3,810.94	6,487.35	2,676.41	70.23%	
33			1,000	4,233.15	-	4,233.15	7,207.82	2,974.67	70.27%	
34			1,500	6,344.20	-	6,344.20	10,810.16	4,465.97	70.39%	
35			2,000	8,455.25	-	8,455.25	14,412.51	5,957.26	70.46%	
36			2,500	10,566.30	-	10,566.30	18,014.85	7,448.55	70.49%	
37			3,000	12,677.35	-	12,677.35	21,617.19	8,939.85	70.52%	
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41			7.1	\$ 43.61	\$ -	\$ 43.61	\$ 58.69	\$ 15.08	34.59%	
42			5.4	\$ 37.82	\$ -	\$ 37.82	\$ 48.82	\$ 11.00	29.07%	
43			7.5	\$ 44.83	\$ -	\$ 44.83	\$ 60.77	\$ 15.94	35.57%	
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				Proposed Bill at Lifeline Usage (3.0 M Gal): \$ 34.83						
				Cost of Service at Lifeline Usage (3.0 M Gal): \$ 40.49						
				% Cost Discount at Lifeline Usage: 13.97%						

Oracle											
[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]			
Line No.	Base Rates	ACRM / PPA Surcharge	Monthly Consumption (M Gal)	Typical Bill			Increase				
				Base	Surcharge	Total	Amount	Percent			
1	Residential 5/8 x 3/4 -inch		-	\$ 19.83	\$ -	\$ 19.83	\$ 21.00	\$ 1.17	5.90%		
2			5	42.34	-	42.34	46.36	4.02	9.50%		
3			15	99.88	-	99.88	111.20	11.32	11.33%		
4			20	131.85	-	131.85	147.23	15.38	11.66%		
5	Present Rates		25	163.82	-	163.82	183.25	19.43	11.86%		
6			30	195.79	-	195.79	219.27	23.48	11.99%		
7			35	227.76	-	227.76	255.30	27.54	12.09%		
8	Basic Service Charge:	\$ 19.83	-	259.73	-	259.73	291.32	31.59	12.16%		
9			40	291.70	-	291.70	327.34	35.65	12.22%		
10	Tier One Breakover (M Gal):	3	45	323.66	-	323.66	363.37	39.70	12.27%		
11	Tier Two Breakover (M Gal):	10	50	355.63	-	355.63	399.39	43.76	12.30%		
12	Tier Three Breakover (M Gal):	99.99	55	387.60	-	387.60	435.41	47.81	12.34%		
13			60	419.57	-	419.57	471.44	51.87	12.36%		
14	Tier One Rate:	\$ 4.0922	\$ -	451.54	-	451.54	507.46	55.92	12.38%		
15	Tier Two Rate:	5.1151	70	483.51	-	483.51	543.48	59.97	12.40%		
16	Tier Three Rate:	6.3938	75	643.35	-	643.35	723.60	80.25	12.47%		
17			100	963.04	-	963.04	1,083.84	120.79	12.54%		
18			150	1,282.73	-	1,282.73	1,444.07	161.34	12.58%		
19	Proposed Rates - Rebuttal		200	1,602.42	-	1,602.42	1,804.30	201.88	12.60%		
20			250	1,922.11	-	1,922.11	2,164.54	242.42	12.61%		
21			300	2,241.80	-	2,241.80	2,524.77	282.97	12.62%		
22	Basic Service Charge:	\$ 21.00	\$ -	2,561.49	-	2,561.49	2,885.01	323.51	12.63%		
23			400	2,881.18	-	2,881.18	3,245.24	364.06	12.64%		
24	Tier One Breakover (M Gal):	3	450	3,200.87	-	3,200.87	3,605.48	404.60	12.64%		
25	Tier Two Breakover (M Gal):	10	500	3,520.56	-	3,520.56	3,965.71	445.15	12.64%		
26	Tier Three Breakover (M Gal):	99.99	550	3,840.25	-	3,840.25	4,325.94	485.69	12.65%		
27			600	4,159.94	-	4,159.94	4,686.18	526.23	12.65%		
28	Tier One Rate:	\$ 4.6110	\$ -	4,479.63	-	4,479.63	5,046.41	566.78	12.65%		
29	Tier Two Rate:	5.7638	700	4,799.32	-	4,799.32	5,408.65	607.32	12.65%		
30	Tier Three Rate:	7.2047	750	5,119.01	-	5,119.01	5,766.88	647.87	12.66%		
31			800	5,438.70	-	5,438.70	6,127.12	688.41	12.66%		
32			850	5,758.39	-	5,758.39	6,487.35	728.96	12.66%		
33			900	6,397.77	-	6,397.77	7,207.82	810.05	12.66%		
34			1,000	9,594.67	-	9,594.67	10,810.16	1,215.49	12.67%		
35			1,500	12,791.57	-	12,791.57	14,412.51	1,620.93	12.67%		
36			2,000	15,988.47	-	15,988.47	18,014.85	2,026.38	12.67%		
37			2,500	19,185.37	-	19,185.37	21,617.19	2,431.82	12.68%		
38			3,000								
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41			5.1	\$ 43.05	\$ -	\$ 43.05	\$ 47.17	\$ 4.11	9.56%		
42	Average Usage:		4.0	\$ 37.00	\$ -	\$ 37.00	\$ 40.35	\$ 3.35	9.05%		
43	Median Usage:		7.5	\$ 55.12	\$ -	\$ 55.12	\$ 60.77	\$ 5.65	10.24%		
44	Standardized Usage:										
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SaddleBrooke Ranch									
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Line No.	Base Rates	ACRM / PPA Surcharge	Monthly Consumption (M Gal)	Typical Bill		Proposed Rates - Rebuttal	Increase		
				Base	Present Rates Surcharge Total		Amount	Percent	
1				\$ 15.00	\$ -	\$ 15.00	\$ 21.00	40.00%	
2	Residential 5/8 x 3/4 - inch		-						
3			5	35.50	-	35.50	46.36	30.59%	
4			15	76.50	-	76.50	111.20	45.36%	
5	Present Rates		20	97.00	-	97.00	147.23	51.78%	
6			25	117.50	-	117.50	183.25	55.96%	
7			30	138.00	-	138.00	219.27	58.89%	
8	Basic Service Charge:	\$ 15.00	35	158.50	-	158.50	255.30	61.07%	
9			40	179.00	-	179.00	281.32	62.75%	
10	Tier One Breakover (M Gal):	99,999	45	199.50	-	199.50	327.34	64.08%	
11	Tier Two Breakover (M Gal):	99,999	50	220.00	-	220.00	363.37	65.17%	
12	Tier Three Breakover (M Gal):	99,999	55	240.50	-	240.50	399.39	66.07%	
13			60	261.00	-	261.00	435.41	66.83%	
14	Tier One Rate:	\$ 4,1000	65	281.50	-	281.50	471.44	67.47%	
15	Tier Two Rate:	4,1000	70	302.00	-	302.00	507.46	68.03%	
16	Tier Three Rate:	4,1000	75	322.50	-	322.50	543.48	68.52%	
17			100	425.00	-	425.00	723.60	70.26%	
18	Proposed Rates - Rebuttal		150	630.00	-	630.00	1,083.84	72.04%	
19			200	835.00	-	835.00	1,444.07	72.94%	
20			250	1,040.00	-	1,040.00	1,804.30	73.49%	
21			300	1,245.00	-	1,245.00	2,164.54	73.86%	
22	Basic Service Charge:	\$ 21.00	350	1,450.00	-	1,450.00	2,524.77	74.12%	
23			400	1,655.00	-	1,655.00	2,885.01	74.32%	
24	Tier One Breakover (M Gal):	3	450	1,860.00	-	1,860.00	3,245.24	74.48%	
25	Tier Two Breakover (M Gal):	10	500	2,065.00	-	2,065.00	3,605.48	74.60%	
26	Tier Three Breakover (M Gal):	99,999	550	2,270.00	-	2,270.00	3,965.71	74.70%	
27			600	2,475.00	-	2,475.00	4,325.94	74.79%	
28	Tier One Rate:	\$ 4,6110	650	2,680.00	-	2,680.00	4,686.18	74.86%	
29	Tier Two Rate:	5,7638	700	2,885.00	-	2,885.00	5,046.41	74.92%	
30	Tier Three Rate:	7,2047	750	3,090.00	-	3,090.00	5,406.65	74.97%	
31			800	3,295.00	-	3,295.00	5,766.88	75.02%	
32			850	3,500.00	-	3,500.00	6,127.12	75.06%	
33			900	3,705.00	-	3,705.00	6,487.35	75.10%	
34			1,000	4,115.00	-	4,115.00	7,207.82	75.16%	
35			1,500	6,165.00	-	6,165.00	10,810.16	75.35%	
36			2,000	8,215.00	-	8,215.00	14,412.51	75.44%	
37			2,500	10,265.00	-	10,265.00	18,014.85	75.50%	
38			3,000	12,315.00	-	12,315.00	21,617.19	75.54%	
39									
40									
41			Average Usage:	\$ 28.96	\$ -	\$ 28.96	\$ 37.17	28.34%	
42			Median Usage:	\$ 25.53	\$ -	\$ 25.53	\$ 32.84	28.65%	
43			Standardized Usage:	\$ 45.75	\$ -	\$ 45.75	\$ 60.77	32.83%	
44									
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55									

Proposed Bill at Lifeline Usage (3.0 M Gal): \$ 34.83  
Cost of Service at Lifeline Usage (3.0 M Gal): \$ 64.23  
% Cost Discount at Lifeline Usage: 45.77%

Average Usage:  
Median Usage:  
Standardized Usage:

Proposed Bill at Lifeline Usage (3.0 M Gal):	\$ 24.93
Cost of Service at Lifeline Usage (3.0 M Gal):	\$ 36.11
% Cost Discount at Lifeline Usage:	30.95%